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## **LCP CHEMICAL SITE OPERABLE UNIT 2 DATA SUMMARY (2017-2019)**

### **TABLE OF CONTENTS**

<b>NARRATIVE .....</b>	<b>1</b>
Background .....	1
Summary of Work Performed .....	1
References .....	4
<b>FIGURES .....</b>	<b>5</b>
<b>TABLES .....</b>	<b>6</b>
<b>ATTACHMENT 1- BORING LOGS .....</b>	<b>7</b>
<b>ATTACHMENT 2- WATERLOO DATA PACKAGE .....</b>	<b>8</b>

# NARRATIVE

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## Background

Honeywell, the Atlantic Richfield Company (“ARCO”), and the Georgia Power Company are Responsible Parties (“RPs”) to an Administrative Order of Consent with the U.S. Environmental Protection Agency (“EPA”), to conduct a Remedial Investigation and Feasibility Study (“RI/FS”) for the LCP Chemicals Superfund Site (the “Site”) located in Brunswick, Georgia. EPA is administering the Site as three Operable Units (“OUs”): OU1 pertains to the salt marsh; OU2 pertains to site-wide groundwater (and the footprint of the former mercury cell building – both soil and groundwater); and OU3 pertains to the upland soil.

Since 2017, the RPs have executed three Work Plans under the direction of EPA to inform the RI/FS for OU2 (EPS, 2017; EPS, 2018a; EPS, 2018b). The work completed includes:

- sampling of site-wide groundwater monitoring wells (performed in 2017);
- a second round of sampling of a subset of the site-wide groundwater monitoring wells (performed in 2018/19);
- subsurface characterization of the cell building area (“CBA”), including soil borings with continuous soil coring and water quality profiling of the caustic brine pool (“CBP”); and
- collection of soil and groundwater for a site-specific mercury distribution coefficient analysis (Kd study) and to provide necessary geochemical inputs for re-examination of the thermodynamic model of metal speciation presented in the 1997 RI, following the CO<sub>2</sub> treatment completed for the CBP in 2016.

Based on a discussion with the EPA February 6, 2019, EPA has agreed that the RPs should submit a summary of soil and groundwater data collected from execution of these work scopes. This summary is organized as an index with supporting elements of work.

## Summary of Work Performed

### Groundwater Sampling

Groundwater sampling was performed in 2017 to obtain a comprehensive measurement of groundwater quality from the entire network of on-site monitoring wells (shown on Figure 1) and

in 2018 for a subset of monitoring wells (Figure 2) in accordance with the respective work plans. The monitoring well analytical testing regimen comprised the following<sup>1</sup>:

- Target Analyte List (“TAL”) metals by Method 6010C (2017) or Method 200.8 (2018);
- Mercury by Method 7470A for high concentrations and Method 1631E for low concentrations;
- Volatile organic compounds (“VOCs”) by Method 8260C;
- Polycyclic aromatic hydrocarbons (“PAHs”) by Method 8270D SIM; and
- pH by field flow-through cell and laboratory test method SM4500-H+B.

Concentrations of metals (including mercury), VOCs, and PAHs detected in groundwater samples are provided in Tables 1a-c, respectively. Geochemical parameters (silica, TDS, alkalinity) and general water quality parameters (pH, conductivity, oxidation-reduction potential (“ORP”)) are provided in Table 1d.

### **Soil Borings**

In November-December 2018, soil borings were completed with continuous soil coring from the ground surface to the base of the Satilla Formation<sup>2</sup> at 13 locations within the CBA (as shown on Figure 3). Boring logs are included as Attachment 1. Soil cores were visually characterized for the presence of metallic mercury and further evaluated through analytical testing of total mercury (Method 1631B) in soil core samples. The sampling interval was dictated by the presence (or absence) of metallic mercury in the soil core but generally followed a vertical frequency of 4 feet, resulting in approximately 12 soil samples per boring (less if observable quantities of metallic mercury were present). Vadose zone soil samples were collected at two depth intervals at approximately 0.5 and 3.5 feet below ground surface (“ft-bgs”) for testing of TAL metals (Method 6020), including mercury (Method 1631B), and PAHs (Method 8270C). In addition, soil cores were examined for PAH indicators including visual observation for discoloration or staining, identification of odor, and use of ultraviolet light scanning for identifying the presence of petroleum. Soil samples were collected for PAH analysis where PAH indicators were observed (whether above or below the water table).

Concentrations of TAL metals (mercury shown separately) and PAHs detected in soil samples are provided in Tables 2a-c, respectively.

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<sup>1</sup> In 2017, select wells downgradient (west) of the CBA were also analyzed for silica (Method 6010C), total dissolved solids (“TDS”) (Method SM2540C), and alkalinity (Method SM2320B to evaluate potential rebound 1 year after the CO<sub>2</sub> neutralization work for the CBP.

<sup>2</sup> Soil and water quality profiling borings generally were terminated in the dense clay layer above the cemented sandstone. The top of the cemented sandstone was tagged in one soil boring, CB2-SB-3.

## CBP Profiling

Profiling of the CBP was accomplished in two phases, as shown on Figure 4. Phase I (December 2018) consisted of direct-push profiling and sampling<sup>3</sup> performed from the water table to the base of the Satilla Formation in an offset boring to 11 soil core borings and in 5 additional borings (2 in the area of the former Salt Plant and 3 north of Cell Building 1). The presence of the CBP was ascertained in real-time via a continuous profile of conductivity measurements, and further confirmed through visual assessment and testing of groundwater purged from discrete sampling zones of approximately 20, 35, and 48 ft-bgs. Groundwater purged at each of the three prescribed depth intervals was passed into a flow-through cell and water quality meter for testing of general water-quality parameters (*i.e.*, temperature, pH, conductivity, redox potential, dissolved oxygen) and subject to the following analytical testing regimen<sup>4</sup>:

- Mercury by Method 1631E;
- Total Dissolved Solids (“TDS”) by Method SM2540C; and
- Silica by Method 4500-SiO<sub>2</sub> C-1997.

Phase II (February 2019) consisted of discrete-interval sampling with a screen-point sampling tool at 14 locations to refine lateral delineation of the CBP within and proximate to the CBA. Groundwater was purged from approximately 45 ft-bgs (zone of peak pH condition based on results from Phase I) and passed into a flow through cell and water quality meter for testing of general water-quality parameters (pH, conductivity, redox potential).

Concentrations of mercury, TDS, and silica detected in groundwater samples collected during Phase I are presented in Table 3a. General water quality parameters (pH, conductivity, ORP, turbidity) from Phase I and Phase II are provided in Table 3b. Real-time vertical profile measurements collected during Phase I are provided as Attachment 2.

## K<sub>d</sub> Study and Thermodynamic Modeling of Metal Speciation

Additional characterization of soil and groundwater served to determine the amount and direction of mercury partitioning between soil and groundwater (K<sub>d</sub> Study) and provide necessary geochemical inputs for re-examination of the chemical thermodynamic model presented in the 1997 RI following the CO<sub>2</sub> treatment and associated pH reduction. The sampling design, which was accomplished December 2018-January 2019, consisted of the following:

- Additional groundwater characterization was performed along the two monitoring well transects from each cell building to the downgradient boundary of OU2 (Figure 5): Cell Building 1 well transect comprised of MW-351 to MW-354 (including new well installation MW-361) and the Cell Building 2 well transect comprised of MW-355 to MW-358 (including new well installation MW-362). In addition to the routine analytical

<sup>3</sup> Profiling and sampling were accomplished through use of the Waterloo Advanced Profiling System tool.

<sup>4</sup> A portion of sample CB2-SB-5-35W allocated for silica and TDS analysis was spilled at the laboratory; the silica and TDS analyses were not performed for this sample. In addition, a portion of sample CB2-SB-5-45W allocated for silica analyses was misplaced at the laboratory; the silica analyses was not performed for this sample.

testing regimen (described in “Site-wide Groundwater Sampling section of this report), these wells were tested for organic carbon (Method SM5310), silica (Method 4500-SiO<sub>2</sub> C-1997), ferrous iron (Method SM3500), sulfate (Method 9056A), sulfide (Method 4500-S2 F-2000), and chloride (Method 9056A).

- An aquifer matrix sample<sup>5</sup> was collected from CBA well installations MW-361A, MW-361B, MW-362A, AND MW-362B to pair with corresponding groundwater sample. These samples were collected at depth corresponding to the approximate midpoint of the well screen. The analytical testing regimen for aquifer matrix samples consisted of total mercury (Method 1631B), mercury fractions F-0 through F-5 (by Selective Sequential Extraction), methylmercury (modified Method 1630), and percent solids (Method SM2540).
- Groundwater samples from MW-506A, MW-506B, MW-507A, and MW-507B were tested for methylmercury (Method 1630) and elemental mercury (Method 1631E) in addition to the routine analytical testing regimen.

Soil and groundwater sampling results pertinent to the K<sub>d</sub> study are presented in Tables 4a and 4b, respectively.

## References

- EPS, 2017. *Work Plan for Comprehensive Groundwater Sampling – 2017 (Operable Unit 2), LCP Chemicals Site, Operable Unit.* (July 2017).
- EPS, 2018a. *Site Characterization Work Plan for Operable Unit 2: Groundwater and Cell Building Area, LCP Chemicals Site.* (August 2018).
- EPS, 2018b. *Work Plan for Caustic Brine Pool Removal Action: Post-Phase 3, LCP Chemicals Site, Revision 1.* (November 2018).

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<sup>5</sup> A Shelby Tube sampler was used for collecting soil samples at depth.



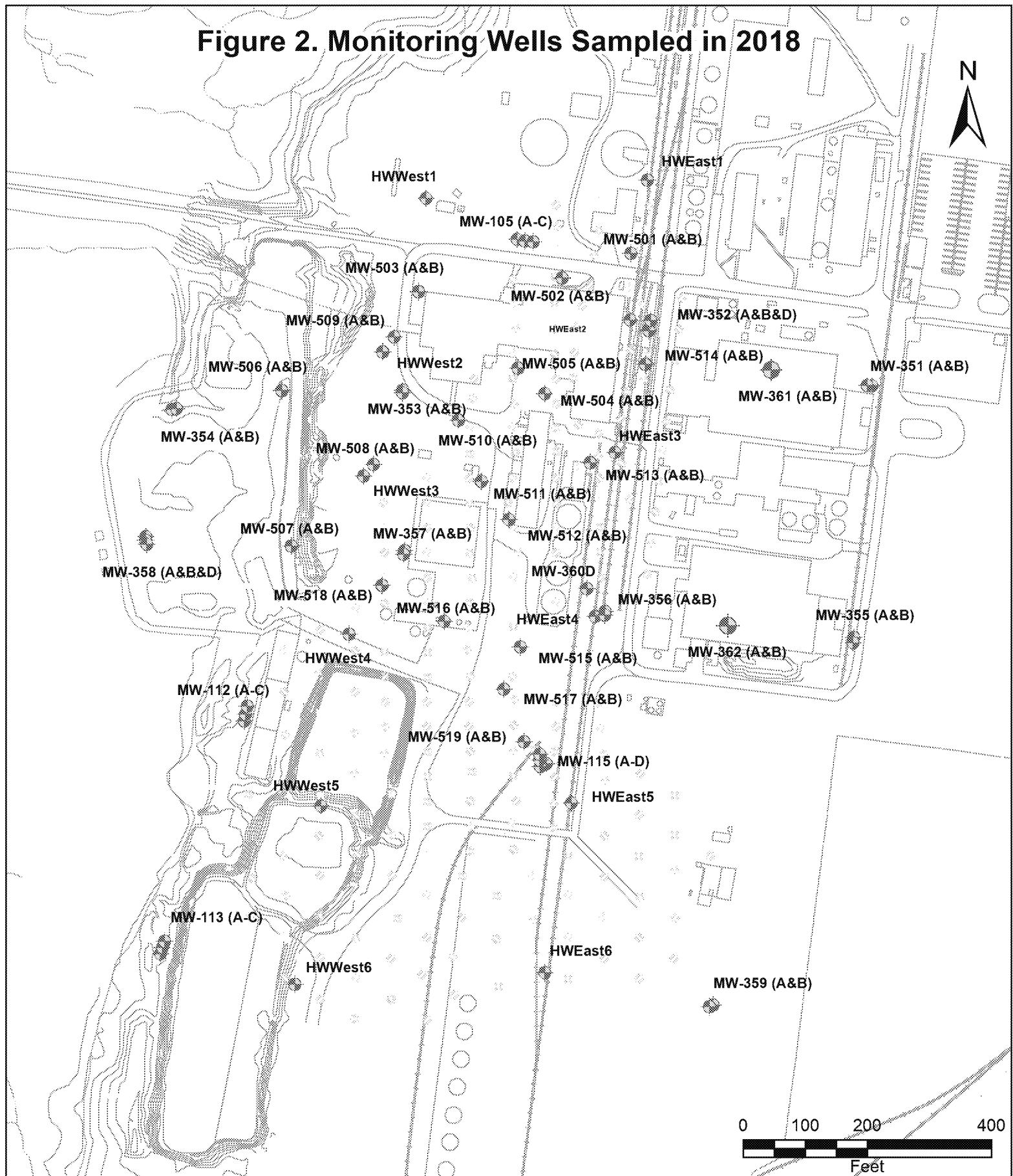
## FIGURES

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## **Figure 1. Monitoring Wells Sampled in 2017**

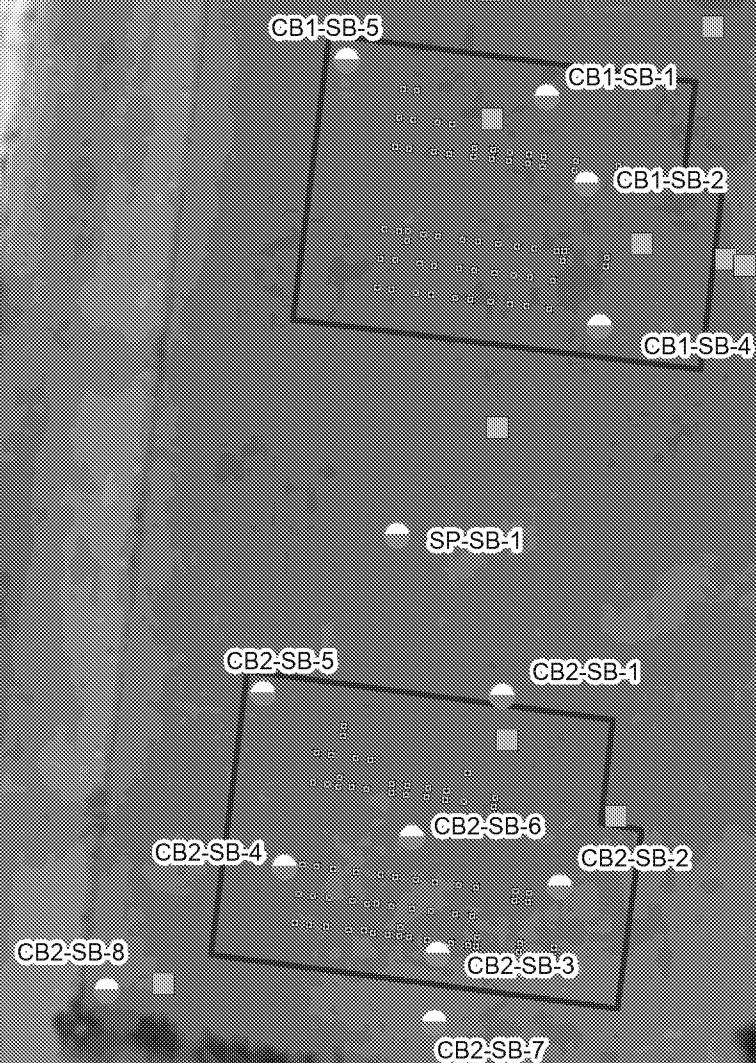


## Figure 2. Monitoring Wells Sampled in 2018



- Monitoring Well
- CO<sub>2</sub> Sparge Well

### Figure 3. Deep Soil Boring Locations



Source: Esri, DigitalGlobe, GeoEye, iDEA, USDA, USGS, AeroGRID, IGN, and the vector data provided by the U.S. National Geospatial-Intelligence Agency.  
0 50 100 200  
[Scale bar] Feet

- Retrofitted Piling
- Deep Soil Boring
- [ ] Cell Buildings
- [■] Shallow Refusal

## Figure 4. CBP Profiling Locations



0 75 150 300

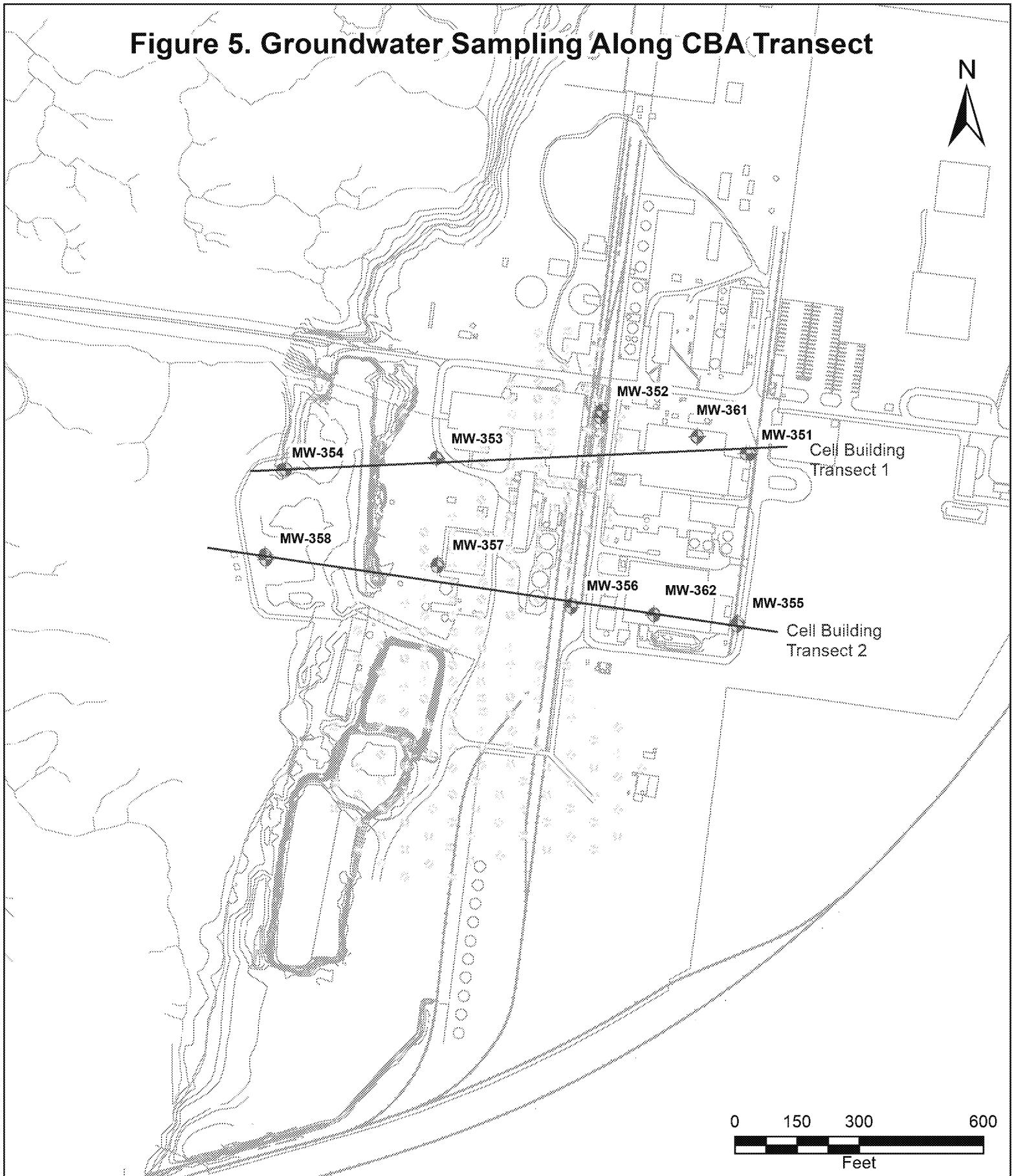


Feet

Source: Esri, DigitalGlobe, GeoEye, i-  
USDA, USGS, AeroGRID, IGN, and th

- Retrofitted Piling
- Phase I Locations
- Cell Buildings
- Phase II Locations
- Shallow Refusal

**Figure 5. Groundwater Sampling Along CBA Transect**



- ◆ Monitoring Well
- CO<sub>2</sub> Sparge Well



## TABLES

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Table 1a. Site-wide Groundwater Sampling Results- Metals

2017

Location	Date Sampled	Aluminum (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Boron (mg/L)	Selenium (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silver (mg/L)	Sulfate (mg/L)	Vanadium (mg/L)	Zinc (mg/L)			
EW-1	10/2/2017	361	4.09	3.4	69.4	4.32	<0.03	29600	29.6	56.2	0.2	3.45	6850	0.88	10200	370	0.9	2.7	11800	<1	<0.05	2850000	2850	31.4	6
EW-2	10/2/2017	1470	<0.1	1.2	72.4	1.04	<0.03	42500	42.5	33.8	0.29	0.35	3360	0.57	11490	422	2.46	1.7	8480	<1	<0.05	2090000	2090	92.9	<2
EW-3	10/1/2017	267	0.45	3.4	80	1.9	<0.03	12900	12.9	93.9	0.26	8.5	7160	3.83	5540	287	3.74	6.1	2640	<1	<0.05	2810000	2810	110	6
EW-4	10/2/2017	178	1.71	2.3	36.9	0.97	0.012	39100	39.1	38.2	0.276	2.55	3380	0.646	7860	364	4.53	5.42	4800	0.5	<0.018	1070000	1070	37.2	6.7
EW-5	10/2/2017	30	0.7	153	51.1	0.71	<0.1	12400	12.4	459	0.98	<0.8	1280	<0.08	4630	3.5	223	40.5	17100	<4	<0.18	1.7E+07	17000	1750	10
EW-6	10/1/2017	22	0.61	4.7	36	1.27	<0.05	5120	5.12	196	0.67	0.6	1610	0.12	4790	19.3	118	19.6	15100	<2	<0.09	1.19E+07	11900	480	19
EW-8	10/1/2017	981	0.19	7	66	11.4	<0.03	28500	28.5	155	0.45	1.31	12500	1.18	16600	333	1.49	4.4	5450	2.7	<0.05	2410000	2410	99.1	4
EW-9	10/1/2017	314	0.14	3	74.2	7.35	0.03	44700	44.7	92.6	0.35	2.01	2970	1.64	15000	646	3.39	4.2	6010	1.2	<0.05	2440000	2440	84.2	4
EW-10	10/1/2017	123	0.59	1.2	25.7	0.062	0.008	72800	72.8	0.42	0.103	12.9	285	0.71	2660	135	0.121	0.35	4740	<0.2	<0.009	6750	6.75	2	8.7
EW-11	10/1/2017	241	0.14	1.4	114	1.62	<0.03	22300	22.3	77.2	0.71	1.74	4120	0.91	10300	101	0.505	9.7	4200	1.3	<0.05	3380000	3380	88.7	4
HWEast1	9/27/2017	36	<0.4	<2	189	<0.08	<0.12	323000	323	6.7	<0.12	<0.6	14600	<0.06	29900	764	0.063	<0.8	6190	<1	<0.1	2780000	2780	23.5	<4
HWEast2	9/27/2017	11	<0.2	<0.8	243	<0.04	<0.06	437000	437	0.4	<0.06	<0.3	10700	0.04	47200	1070	0.00194	0.5	6320	<0.7	<0.05	1950000	1950	1	<2
HWEast3	9/27/2017	10	<0.1	<0.4	151	<0.02	<0.03	401000	401	<0.2	<0.03	<0.15	7860	0.04	33000	556	0.00077	<0.2	4660	<0.4	<0.03	1050000	1050	0.5	<1
HWEast4	9/27/2017	10	<0.4	2	10.4	0.11	<0.12	4950	4.95	33.8	0.16	1.3	425	<0.06	90.9	1.2	6.89	8.4	12600	<1	<0.1	1.34E+07	13400	229	<4
HWEast5	9/27/2017	51	<0.4	<2	7.7	0.18	<0.12	4970	4.97	28.9	<0.12	<0.6	1030	0.14	47.3	3.3	9.07	5.1	6220	<1	<0.1	1.07E+07	10700	288	<4
HWEast6	9/27/2017	1580	<0.04	0.7	17.5	0.333	<0.012	23000	23	6.05	0.118	0.15	613	0.258	1990	24.7	0.0331	0.48	1570	0.5	<0.01	245000	245	18	2.4
HWWest1	9/30/2017	8	<0.2	5.4	92.8	<0.05	<0.05	246000	246	16	<0.09	<0.4	3020	0.14	20900	123	2.3	1.8	8750	<2	<0.09	4050000	4050	115	<3
HWWest2	9/30/2017	18	<0.5	75	3.7	<0.13	<0.13	3410	3.41	94.6	0.64	11	724	0.32	12.8	0.5	43.4	30.8	12700	<5	<0.23	1.36E+07	13600	576	8
HWWest3	9/30/2017	16	0.6	68	3.8	<0.13	0.14	3220	3.22	98.6	0.58	10.6	691	<0.1	3.9	0.3	41.1	28.1	7800	<5	<0.23	1.41E+07	14100	567	11
HWWest4	9/30/2017	53	<0.5	5	12.4	0.37	<0.13	5240	5.24	59.8	0.23	<1	1750	0.25	361	9	1.79	7.6	10300	<5	<0.23	1.2E+07	12000	471	8
HWWest5	9/30/2017	31	<0.4	<2	92.2	0.12	<0.1	114000	114	4.9	<0.18	<0.8	237	0.93	7380	53.4	0.093	1.2	30600	<4	<0.18	1.09E+07	10900	15.1	<6
HWWest6	9/30/2017	31	<0.4	<2	71.6	<0.1	<0.1	87200	87.2	4.8	<0.18	<0.8	442	0.13	6180	48.7	0.0817	1	66900	<4	<0.18	1.2E+07	12000	31.5	<6
MW-101A	9/22/2017	126	<0.4	<2	22.8	0.96	<0.12	266000	266	25.7	0.15	<0.6	<3	<0.06	66500	99	0.00111	1	16700	<1	<0.1	1660000	1660	38.5	<4
MW-101B	9/22/2017	111	<0.4	<2	25.3	0.97	<0.12	195000	195	27.5	0.34	<0.6	10	<0.06	65200	60	0.002	1.3	21600	<1	<0.1	2010000	2010	36.8	<4
MW-101C	9/22/2017	44	<0.02	<0.08	28.9	0.005	<0.006	85300	85.3	0.06	0.012	0.04	1060	0.015	13200	79.5	0.00034	0.05	2520	<0.07	<0.005	52200	52.2	<0.5	<2
MW-101D	9/22/2017	55	<1	<4	18	0.3	<0.3	6080	6.08	8	<0.3	<1.5	58	<0.2	1020	17	0.45	<2	170000	<4	<0.3	3.11E+07	31100	27	30
MW-102A	9/7/2017	12	<0.04	0.2	50.2	0.094	<0.012	122000	122	1.88	0.101	0.32	<3	0.106	173000	159	0.00166	0.4	82500	1.3	<0.01	1790000	1790	3.9	0.7
MW-102B	9/7/2017	30	<0.04	0.2	36.6	0.082	<0.012	158000	158	6.78	0.112	0.38	133	0.133	27400	89.3	0.00182	0.43	14600	0.6	<0.01	808000	808	9.6	2.5
MW-102C	9/7/2017	8	<0.04	<0.2	71.5	0.026	<0.012	303000	303	2.63	0.067	0.75	482	0.225	53800	199	0.00083	0.37	12200	0.3	<0.01	886000	886	4.2	2.3
MW-103A	9/7/2017	44	<0.1	1.3	372	0.03	<0.03	89100	80.1	1.6	0.14	0.23	14	0.05	201000	7.7	<0.0003	0.8	96600	3.1	<0.03	2190000	2190	2.9	2
MW-103B	9/7/2017	195	<0.1	6.6	56.5	0.31	<0.03	15900	15.9	3.4	0.15	2.89	20	0.77	27800	18.7	0.00311	1.1	16600	0.5	<0.03	526000	526	8.4	63
MW-103C	9/7/2017	231	0.1	<0.4	64.1	0.95	<0.03	41200	41.2	17.7	0.28	0.83	29	0.59	18600	56.6	0.014	1.1	8660	1.3	<0.03	963000	963	32.8	2
MW-104B	9/7/2017	1060	0.07	1.1	25	1.08	<0.012	5090	5.09	7.45	0.108	0.28	232	0.23	1500	11.6	0.152	0.57	1180	0.8	<0.01	101000	101	21	0.8
MW-104C	9/7/2017	1520	0.09	1	14.2	1.25	<0.012	2890	2.89	9.06	0.103	0.23	466	0.122	572	16.6	0.12	0.69	1080	1	<0.01	145000	145	30.2	1.3
MW-105A	9/7/2017	33	<0.04	0.2	20	<0.008	<0.012	149000	149	1.47	0.018	1.2	999	0.153	10300	492	0.00209	0.2	9120	0.2	<0.01	8670	8.67	1.4	1.2
MW-105B	9/7/2017	3530	<0.1	3	16.9	0.15	<0.03	9480	9.48	11.7	0.42	0.44	381	6.3	2390	17.9	0.88	1.4	3030	1.1	<0.03	600000	600	53.8	1
MW-105C	9/7/2017	167	0.06	1.4	33.1	1.45	<0.012	1970	1.97	10.2	0.196	0.28	4850	0.316	781	16.3	1.36	0.46	1850	0.4	<0.01	2060000	2060	4.5	3
MW-106A	9/21/2017	74	0.021	6.6	6.03	<0.004	0.009	47900	47.9	0.93	0.092	1.38	7240	0.107	3330	179	7.200001E-04	0.11	3400	0.3	<0.005	4470	44.7	1.5	1.2
MW-106B	9/21/2017	178	<0.02	0.54	1.31	0.015	<0.006	71	0.071	0.68	0.02	0.05	11	0.021	29	1.1	0.00036	0.04	140	0.3	<0.005	13900	13.9	1.1	1.2
MW-106C	9/21/2017	20	0.02	0.32	118	0.011	0.013	38600	38.6	2.14	0.021	0.21	2740	0.026	4340	74.6	1.95	0.55	2720	0.2	0.005	2150000	2150	4.3	1.3
MW-107A	9/21/2017	68	<0.1	<0.4	5.04	<0.02	<0.03	23300	23.3	<0.2	<0.03	<0.15	50	0.02	1470	<0.3	0.00034	<0.2	800	<0.4	<0.03	8310	8.31	<1.1	1
MW-107B	9/21/2017	118	<0.1	0.5	11.8	<0.02	<0.03	2030	2.03	0.5	<0.03	<0.15	51	<0.02	284	3.3	<0.2	940	<0.4	<0.03	22800	22.8	<1.1	<1	
MW-107C	9/26/2017	3	<0.1	<0.4	39.4	<0.02	<0.03	56300	56.3	<0.2	<0.03	<0.15	2200												

Table 1a. Site-wide Groundwater Sampling Results- Metals

2017

Location	Date Sampled	Aluminum (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Boron (mg/L)	Sulfur (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Vanadium (mg/L)	Zinc (mg/L)		
MW-115C	9/23/2017	<4	<0.4	<2	153	0.31	<0.12	21100	21.1	20	<0.16	<0.8	4760	<0.08	28500	105	0.37	<0.8	5740	<4	<0.16	7340000	7340	23	<4
MW-115D	9/23/2017	7	<0.4	<2	2.7	<0.1	<0.12	2330	2.33	13.6	<0.16	<0.8	147	<0.08	90.2	2.2	8.91	2.4	3450	<4	<0.16	8630000	8630	80.3	55
MW-116A	9/23/2017	39	<0.02	0.13	1.66	<0.004	<0.006	12500	12.5	0.27	0.074	1.02	227	0.339	1740	5	0.00136	0.05	1350	<0.07	<0.005	5740	5.74	<0.5	3.3
MW-116B	9/23/2017	69	<0.02	0.12	3.87	0.114	<0.006	3160	3.16	0.85	0.011	0.08	190	0.034	1590	3	0.00086	<0.04	1050	0.1	<0.005	105000	105	1.7	0.8
MW-116C	9/23/2017	539	<0.2	<0.8	78.9	0.57	<0.06	41100	41.1	14.5	0.08	<0.3	2430	0.14	2140	29.9	0.134	0.6	2660	<0.7	<0.05	2100000	2100	65.4	<2
MW-117A	9/24/2017	115	<0.02	0.22	7.24	0.009	<0.006	17800	17.8	0.6	0.046	<0.03	662	0.01	1890	7.7	0.00579	<0.04	2880	0.09	<0.005	18500	18.5	0.9	<0.2
MW-117B	9/24/2017	197	<0.02	0.09	52.6	0.113	<0.006	3770	3.77	0.14	0.008	0.09	620	0.057	1560	4.5	6.800001E-04	<0.04	1100	<0.07	<0.005	27000	27	0.7	0.4
MW-117C	9/24/2017	41	<0.02	<0.08	55.3	0.039	<0.006	13500	13.5	0.4	0.009	<0.03	1920	0.031	1930	41.9	0.00074	<0.04	920	<0.07	<0.005	23900	23.9	1.1	0.3
MW-117D	9/24/2017	<4	<0.02	<0.08	14.9	<0.004	<0.006	99300	99.3	0.12	0.019	0.11	2420	0.037	3640	130	0.00071	0.06	870	<0.07	<0.005	18000	18	<0.5	0.6
MW-131	9/24/2017	103000	0.28	10.5	105	2.74	0.596	8500	8.5	123	5.2	12.9	14000	21.1	4310	96.2	8.4	21.7	5800	7.8	0.028	654000	654	317	28.4
MW-132	9/27/2017	59200	<0.1	12.8	94.1	3.29	0.23	9300	9.3	98.3	2.24	1.36	14100	12	4550	84.3	2.23	15.5	5660	5.5	<0.03	930000	930	356	23
MW-133	9/27/2017	34000	<0.2	18.8	109	12.6	0.28	29700	20.7	114	1.42	<0.3	10700	7.44	19800	64.5	1.83	14	14000	8	<0.05	1580000	1580	394	19
MW-135	9/24/2017	28600	<0.1	7.1	22	0.58	<0.03	4270	4.27	24.5	0.77	3.61	4340	9.43	1530	19.7	1.12	5.7	8110	2.2	<0.03	1230000	1230	62.5	6
MW-1C	10/23/2017	45	<0.4	<2	128	2.04	<0.1	24900	24.9	133	0.3	<0.8	7610	0.16	19000	87.7	1.1	2.8	8540	<4	<0.18	664000	6640	126	<6
MW-2C	10/23/2017	33	0.5	<2	186	1.13	<0.1	29100	20.1	87.2	2.75	<0.8	8080	0.09	20500	110	0.78	1.9	7810	<4	<0.18	6630000	6630	72.7	22
MW-301A	10/23/2017	47	0.38	13.9	145	<0.05	<0.05	229000	229	1.4	0.19	0.8	26	0.19	613000	397	8.140001E-03	0.05	18000	2	<0.09	5620000	5620	3.9	13
MW-301B	10/23/2017	36900	0.39	37.2	577	5.28	2.44	6040	6.04	333	12.1	12.7	7720	13.5	992	20.6	4.27	24	1800	5	<0.09	857000	857	604	117
MW-302	9/28/2017	29000	0.24	71.2	453	1.75	0.18	21800	21.8	442	1.24	4.5	4040	2.91	9960	50.4	0.5	13.4	5350	19.3	<0.03	613000	613	645	24
MW-303	9/29/2017	872	<0.02	<0.08	59.5	0.475	<0.006	4000	4	0.26	0.007	4.27	2900	0.187	972	79.6	0.00166	0.07	2560	<0.07	<0.005	69000	69	2.3	3.2
MW-304	9/24/2017	10600	<0.4	7	79	6.44	<0.12	22600	22.6	113	0.84	<0.6	710	1.95	2320	70	9.18	11.9	24000	4	<0.1	5370000	5370	1120	<4
MW-305	9/27/2017	1630	<0.4	8	136	6.03	<0.12	80600	80.6	49.2	0.42	79.3	199	4.71	78300	74.3	0.81	7.4	47500	5	<0.1	4400000	4400	227	157
MW-306B	9/29/2017	1120	<0.4	11	74.6	2.08	0.51	14300	14.3	39.1	1.11	19.8	514	15.2	68	15.5	12900	4	<0.1	2320000	2320	203	46		
MW-307A	9/26/2017	30600	0.12	7.1	58.2	2.22	0.11	7830	7.83	63.3	0.81	121	18000	8.16	2480	78.6	0.99	4.8	2580	4.4	0.05	280000	280	126	36
MW-307B	9/26/2017	15700	<0.1	4.8	56.9	3.99	0.1	5030	5.03	55.8	0.93	26	5500	5.69	3900	50.3	0.11	8.9	11900	3.2	<0.03	1020000	1020	124	33
MW-308	9/28/2017	375	<0.1	0.9	77.5	0.1	<0.03	669000	669	10.9	0.05	4.11	2890	0.49	36400	464	0.00247	0.3	17700	0.4	<0.03	693000	693	16.2	11
MW-309	9/29/2017	92	<0.04	<0.2	69.4	0.054	<0.012	19300	19.3	0.3	<0.012	14.4	4220	1.92	3280	85.3	0.00198	0.38	5290	<0.1	<0.01	330000	330	4.5	143
MW-310A	9/28/2017	1090	<0.1	3.7	250	3.79	<0.03	99200	99.2	5.2	<0.03	6.43	3470	0.15	69600	278	0.0016	0.3	27300	1.8	<0.03	1190000	1190	10.9	10
MW-310B	9/28/2017	<4	<0.1	<0.4	57.6	0.02	<0.03	541000	541	<0.2	<0.03	<0.15	30700	0.03	53300	1270	0.00089	<0.2	29900	<0.4	<0.03	498000	498	<0.5	1
MW-311A	9/29/2017	34	<0.1	1.6	52.4	0.21	<0.03	28200	28.2	2.5	0.22	16.4	15	2.76	43900	38.7	0.006	0.6	17000	<0.4	<0.03	561000	561	6.6	193
MW-311B	9/29/2017	173	<0.4	<2	115	1.3	<0.12	410000	410	58	1.07	1.8	3410	0.22	103000	1260	0.41	3.2	16600	2	<0.1	3610000	3610	81.6	<4
MW-312A	9/29/2017	1570	<0.2	2.9	49.4	3.26	<0.06	42200	42.2	23.3	0.31	25.7	38	4.91	88000	58.4	0.00953	2.5	41600	1	<0.05	1470000	1470	87.4	87
MW-312B	9/29/2017	7670	<0.4	25	179	13.5	<0.12	57000	57	406	2.16	400	8.12	22700	221	0.23	42.5	10200	13	<0.1	3990000	3990	803	19	
MW-313A	9/29/2017	8890	<0.2	30.1	209	11.6	0.26	42800	42.8	117	1.12	210	570	20.8	62400	55	1.6	81.5	43700	10	<0.05	1720000	1720	477	1990
MW-313B	9/29/2017	44600	<0.4	38	178	15.8	0.91	25500	25.5	158	3.7	16.2	8720	12.8	4410	106	3.38	23.2	16700	15	<0.1	2430000	2430	425	39
MW-314A	9/25/2017	102	<0.02	0.34	15.8	0.014	<0.006	22800	22.8	0.19	0.018	2	110	0.226	2420	57.5	0.00062	<0.04	1830	<0.2	<0.008	18700	18.7	0.9	0.9
MW-314B	9/25/2017	99	<0.02	<0.09	128	0.356	0.011	8830	8.83	0.26	0.022	0.49	4240	0.179	3010	64.1	0.00158	<0.04	1070	<0.2	<0.008	11900	11.9	1.4	3.8
MW-351A	9/30/2017	41	<0.02	0.24	39.9	0.137	<0.005	14300	14.3	0.16	0.018	0.44	384	0.029	2500	11.2	0.00366	0.06	2100	<0.2	0.014	23400	23.4	<0.5	1.4
MW-351B	9/30/2017	1410	<0.1	2.8	63.9	1.72	0.06	16800	16.8	28.8	0.29	1.77	2110	2.31	2800	71.4	0.28	3.1	3880	<1	<0.05	1980000	1980	91.4	22
MW-352A	10/1/2017	116	<0.1	0.9	33	0.09	<0.03	4390	4.39	4.3	0.09	<0.2	4360	0.2	1020	115	2.7	0.4	3390	<1	<0.05	2010000	2010	4.1	2
MW-352B	10/1/2017	<8	<0.4	5	406	0.17	<0.1	19800	19.8	14.7	<0.18	<0.8	8580	<0.08	21800	197	19	3.6	36300	<4	<0.18	13700	1370	10.1	<6
MW-352D	10/1/2017	<4	0.05	<0.2	200	<0.01	<0.01	403000	403	0.26	<0.018	0.45	11600	0.116	43500	939	0.0107	0.37	5250	<0.4	<0.018	1130000	1130	0.5	25.5
MW-353A	9/25/2017	2850	<0.1	4.7	78.2	0.69	0.04	5160	5.16	41.3	0.39	1.92	288	1.38	699	8	0.58	2.3	1350	2.4	<0.04	1890000	1890	88.7	3
MW-353B	9/25/2017	16900																							

Table 1a. Site-wide Groundwater Sampling Results- Metals

2017

Location	Date Sampled	Aluminum (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Boron (mg/L)	Sulfur (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Vanadium (mg/L)	Zinc (mg/L)		
MW-506B	9/25/2017	53000	<1	21	1310	39.2	<0.3	74200	74.2	558	2.1	<2	19500	2.2	11700	292	5.88	26	12200	<10	<0.4	705000	7050	1730	10
MW-507A	9/26/2017	2270	<0.4	15	175	13.7	<0.12	29100	29.1	355	0.91	0.7	3220	1.1	35600	106	7.8	13.3	4030	9	<0.1	4920000	4920	429	5
MW-507B	9/26/2017	1560	<0.4	13	178	21.6	<0.12	34700	34.7	497	1.4	1.7	2750	1.3	22200	76	5.82	20.3	4690	8	<0.1	8010000	8010	835	<4
MW-508A	9/23/2017	7230	<0.1	7.8	83.3	6.62	0.03	3160	3.16	86.5	0.5	0.3	1960	2.71	1840	22.5	1.96	4.6	890	4.2	<0.04	2500000	2500	153	2
MW-508B	9/23/2017	2590	<1	15	153	18	0.3	100000	100	962	1.6	<2	6080	0.6	8150	227	31.7	48	9100	<10	<0.4	1.12E+07	11200	3360	120
MW-509A	9/23/2017	2220	<0.1	1.1	9.02	0.14	<0.03	7080	7.08	19.2	0.15	<0.2	1160	0.64	1660	50.6	0.36	0.7	3860	<1	<0.04	979000	979	44.9	6
MW-509B	9/23/2017	25300	<1	45	858	36.6	0.7	38600	38.6	1090	4.5	<2	1890	17.7	649	28	47.5	81	5200	17	<0.4	9450000	9450	3740	40
MW-510A	9/25/2017	113000	2.1	135	2070	41.6	2.25	31300	31.3	732	11.8	34.5	20500	215	1930	320	65	40.8	5700	26	<0.16	2450000	2450	916	79
MW-510B	9/25/2017	960	<1	9	155	12.5	<0.3	50300	50.3	523	0.6	<2	6230	0.5	63500	180	12.6	19	10400	<10	<0.4	8830000	8830	1230	<10
MW-511A	9/25/2017	100	<0.1	0.5	3.56	0.28	<0.03	1970	1.97	2.9	0.1	<0.2	209	0.05	1400	5.6	0.05	0.3	5030	<1	<0.04	1370000	1370	5.1	<1
MW-511B	9/25/2017	90	<0.1	<0.5	64.7	0.91	0.03	23800	23.8	30.8	0.13	<0.2	3690	0.1	11400	39.8	2.57	0.8	3690	<1	<0.04	2770000	2770	14.1	<1
MW-512A	9/26/2017	230	<0.2	<0.8	11.4	0.13	<0.06	15300	15.3	5	0.06	<0.3	3210	0.1	2740	54.2	9.2700001E-03	<0.4	3240	<0.7	<0.05	1770000	1770	8.4	<2
MW-512B	9/26/2017	66	<0.4	<2	61.6	4.28	<0.12	21900	21.9	83.1	0.27	<0.6	3670	0.07	28100	38	12.2	4.4	11000	<1	<0.1	6440000	6440	95.2	21
MW-513A	9/30/2017	42500	0.67	43.1	468	2.91	0.5	2980	2.98	202	5.06	21.3	23800	53.8	899	30	34.8	16.9	3250	7	0.15	931000	931	317	33
MW-513B	9/30/2017	22	0.9	336	41.6	<0.13	<0.13	6360	6.36	49.4	0.64	<1	677	0.64	28	0.7	528	26	15400	<5	<0.23	1.24E+07	12400	338	<8
MW-514A	10/1/2017	70	<0.2	<0.8	28.2	0.07	<0.05	12900	12.9	1.3	<0.09	<0.4	23100	0.06	9620	345	1.91	<0.4	3270	<2	<0.09	2690000	2690	1.9	4
MW-514B	10/1/2017	245	0.1	3.9	36	3.65	0.056	4210	4.21	22	0.489	0.85	9940	5.86	1540	150	6.72	1.82	1990	<0.4	<0.018	897000	897	21.1	15.6
MW-515A	9/30/2017	1360	<0.1	9.1	155	13.6	0.09	9610	9.61	62.2	0.88	0.87	1130	42	345	9.1	86.8	9.1	930	2.3	<0.05	1710000	1710	138	5
MW-515B	9/30/2017	1690	<0.2	23.4	214	67.4	<0.05	27200	27.2	211	0.82	0.8	13400	4.39	10600	261	9.7	10.8	5880	4	<0.09	2810000	2810	229	13
MW-516A	10/2/2017	1410	<0.1	7.4	105	13.1	<0.03	11800	11.8	150	0.74	1.09	3990	17.2	9060	62.4	27.2	5.9	1720	3.6	<0.05	2050000	2050	196	9
MW-516B	10/2/2017	40	<0.2	4.1	5.28	0.07	0.65	2090	2.09	45.1	0.45	6.6	384	0.52	875	3.1	4.31	11.3	22900	<2	<0.09	6760000	6760	259	21
MW-517A	10/2/2017	934	0.3	11.9	219	23	0.18	7400	7.4	83.2	2.16	3.6	1590	54.2	563	13.2	85	12.4	780	4	0.21	1340000	1340	208	6
MW-517B	10/2/2017	178	0.45	21.5	117	17.7	0.07	24700	24.7	371	1.27	4.6	11000	3.57	10700	74	39.6	23.8	8990	5	0.15	4500000	4500	465	7
MW-518A	10/2/2017	4870	<0.1	11.1	87.1	17.3	0.04	8650	8.65	101	1.01	1.57	394	7.97	2410	104	28.4	10.6	2260	3.9	<0.05	1920000	1920	177	2
MW-518B	10/2/2017	230	<0.1	1.7	71.9	5.19	<0.03	16900	16.9	71.2	0.25	<0.2	6940	0.76	11800	78.1	1.79	1.6	3150	<1	<0.05	2670000	2670	57	2
MW-519A	10/2/2017	5250	<0.2	7.3	61.3	19.9	0.06	9300	9.3	103	1.01	2.3	4760	27.6	3200	32.6	6.94	5.9	749	3	<0.09	1040000	1040	132	11
MW-519B	10/24/2017	184	3.2	<2	149	0.99	<0.1	31200	31.2	96.2	0.35	0.9	13100	2.1	19100	177	2.34	3.1	14600	<4	<0.18	8950000	8950	96.9	30

**Table 1a. Site-wide Groundwater Sampling Results- Metals**

Table 1a. Site-wide Groundwater Sampling Results- Metals

2018-2019

Location	Date Sampled	Aluminum (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Boron (mg/L)	Bromide (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chlorine (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Vanadium (mg/L)	Zinc (mg/L)		
MW-509A	9/23/2018	2010	<0.454	2.03	8.62	<0.202	<0.404	8050	8.05	16.5	<0.15	<1.01	1000	5.45	2080	45.5	<0.25	<2.02	3850	26.9	<0.101	845000	845	54.4	14.4
MW-509B	9/23/2018	16600	<0.454	46.6	657	28.3	0.568	39600	39.6	602	2.3	4.9	587	6.08	998	21.4	44.7	68.6	5400	148	<0.101	9430000	9430	2920	18.4
MW-510A	9/26/2018	89900	2.55	81.5	769	19.9	0.921	28500	28.5	324	5.55	23.5	16000	103	2880	268	45.2	22.1	6760	180	0.242	2170000	2170	583	35.6
MW-510B	9/26/2018	847	0.583	16.9	132	11.6	<0.405	39800	39.8	453	1.18	3.36	4310	0.743	47400	126	6.9	25.7	9210	42.2	<0.101	6860000	6860	916	<8.09
MW-511A <sup>b)</sup>	1/10/2019	489	<0.454	2.87	2.51	0.253	<0.404	1210	1.21	2.33	<0.15	<0.2	119	<0.252	881	<5.05	<2.02	3800	5.57	<0.101	1010000	1010	7.88	<1.62	
MW-511B	9/24/2018	86.3	<0.454	1.25	46.7	0.474	<0.404	25300	25.3	23.5	<0.15	<1.01	3070	<0.252	9050	27.6	2.1	<2.02	3270	40.6	<0.101	2870000	2870	23.6	<8.08
MW-512A	9/26/2018	2250	<0.454	25.3	143	24	<0.404	16400	16.4	178	1.44	1.25	6810	37.1	9110	94.1	34	8.64	1160	69.2	<0.101	1690000	1690	295	<8.08
MW-512B	9/26/2018	<40.4	<0.454	3.69	8.36	<0.202	<0.404	19200	10.2	5.48	0.4	<1.01	610	<0.252	20600	204	<0.05	<2.02	26500	38.2	<0.101	5740000	5740	33	<8.08
MW-513A	9/25/2018	58900	1.43	69.5	467	3.13	0.912	4820	4.82	212	7.62	39	29100	71	1670	38.2	62.6	15.8	2040	53.1	0.118	524000	524	383	48.9
MW-513B	9/25/2018	<202	2.8	112	51.4	<0.202	<0.404	19400	10.4	53.7	0.7	<1.01	462	0.403	1810	<5.05	353	22	13000	45.8	<0.101	1.02E+07	10200	188	18.9
MW-514A	9/25/2018	99.8	<0.454	2.35	13.1	<0.202	<0.404	4460	4.46	3.38	0.28	<1.01	9950	5.05	5000	131	2.9	<2.02	1120	24.4	<0.101	1530000	1530	<8.58	<8.08
MW-514B	9/25/2018	2110	<0.454	20.9	90.2	7.13	0.509	4850	4.85	40.5	3.18	2.85	7880	11.3	1760	90.4	9.2	5.94	1040	49.1	<0.101	338000	338	35.3	32.4
MW-515A	9/27/2018	198	<0.455	1.01	9.02	<0.202	<0.405	19400	10.4	4.84	<0.15	<1.01	1950	<0.253	2150	32.7	<0.05	<2.02	2780	<22.3	<0.101	1540000	1540	9.84	19.1
MW-515B	9/27/2018	75.2	<0.455	2.46	50.3	4.87	<0.405	19500	19.5	125	0.63	2.91	2780	0.447	24100	28.5	16.3	11.6	9980	<22.3	<0.101	5770000	5770	108	<8.09
MW-516A	9/27/2018	5660	<0.455	23.9	66.6	13.3	<0.405	9580	9.58	84.7	1.09	1.67	356	8.62	2710	98.5	26.2	10.5	1510	75.5	<0.101	1660000	1660	161	<8.09
MW-516B	9/27/2018	315	<0.455	4.93	68.3	5.02	<0.405	18000	18	83.1	0.32	<1.01	6310	2.04	13200	71.6	1.8	2.59	3470	22.8	<0.101	2560000	2560	52.7	<8.09
MW-517A	9/28/2018	1290	<0.455	27.8	200	19.3	<0.405	8170	8.17	85.1	2.31	4.19	1440	67.1	1300	15.6	73.2	15.1	<744	84	<0.101	1370000	1370	189	<8.09
MW-517B	9/28/2018	228	1.47	59	140	17.4	<0.405	19500	19.5	322	0.98	2.88	3400	4.43	5860	55.4	46.8	24.6	6180	157	<0.101	4340000	4340	663	<8.09
MW-518A	9/27/2018	4490	<0.455	32.2	199	14.1	<0.405	30300	30.3	329	0.94	2.44	3640	3.04	35700	175	6.6	14.3	4400	98.2	<0.101	4150000	4150	438	<8.09
MW-518B	9/27/2018	2900	<0.455	27.4	255	25.3	<0.405	55700	55.7	525	1.51	3.46	3070	2.54	29700	125	6.9	24.6	4590	94.6	<0.101	7380000	7380	832	<8.09
MW-519A	9/28/2018	10000	<0.455	23.8	79.5	30.4	<0.405	12700	12.7	122	1.47	4.68	6300	42.7	5620	57.4	8.2	10.7	<744	92.3	<0.101	829000	829	177	<8.09
MW-519B	9/28/2018	42	<0.455	2.08	99.8	0.964	<0.405	28800	28.8	104	0.34	<1.01	9790	<0.253	21200	134	1.1	3.58	11600	<22.3	<0.101	7560000	7560	102	<8.09

Notes: <sup>b)</sup> Well re-sampled in March 2019 for Hg

**Table 1b. Site-wide Groundwater Sampling Results- VOCs**

**Table 1b. Site-wide Groundwater Sampling Results- VOCs**

2017

**Table 1b. Site-wide Groundwater Sampling Results- VOCs**

**Table 1b. Site-wide Groundwater Sampling Results- VOCs**

2017

Table 1b. Site-wide Groundwater Sampling Results- VOCs

Yardcode	Date Sampled	Depth (ft)	Elevation (ft)	Groundwater gradient		Elevation	Elevation	Groundwater gradient		Elevation	Elevation	Groundwater gradient		Elevation	Elevation	Groundwater gradient		Elevation	Elevation	Groundwater gradient		Elevation	Elevation	Groundwater gradient			
				ft	ft			ft	ft			ft	ft			ft	ft			ft	ft	ft	ft			ft	ft
MW-352A	10/1/2017	<2.7	<0.13	-2.6	<3.3	1.1	<0.12	-0.18	<0.091	-0.18	<0.18	0.1	<0.098	1.3	<0.18	-0.072	<0.068	5.3	<0.18	<0.14							
MW-352B	10/1/2017	<2.7	<0.13	-2.6	1.3			-0.18	<0.091	-0.18	<0.18	0.23	<0.098	<0.11	<0.18	-0.072	<0.068	<0.067	<0.18	<0.14							
MW-352D	10/1/2017	<2.7	<0.13	-2.6	4.2			-0.062	<0.12	-0.16	<0.091	-0.18	<0.18	0.1	<0.098	<0.11	<0.16	-0.072	<0.068	<0.067	<0.18	<0.14					
MW-352A	9/25/2017	<2.70	<1.3	-2.60	<3.0	<0.2	<1.2	-0.18	<0.1	<1.5	<0.5	<6.9	<0.6	4.0	<1.5	<7.2	<6.8	<0.7	<1.8	<1.4							
MW-353B	9/25/2017	<1.40	<6.5	-3.30	<1.70	<3.1	<6	<8	<6.6	<8	<8	<3.5	<4.8	<5.5	<8	<3.6	<3.4	<3.4	<9	<7							
MW-354A	9/5/2017	<2.7	<0.13	-2.6	5.7	1.4	<0.12	-0.18	<0.091	<0.18	<0.18	0.18	<0.098	1.69	<0.18	<0.072	<0.068	0.1	<0.18	<0.14							
MW-354B	9/5/2017	<2.7	<0.13	-2.6	5.8	0.98	<0.12	-0.18	<0.091	<0.18	<0.18	0.09	<0.098	1.1	<0.18	<0.072	0.09	<0.067	<0.18	<0.14							
MW-355A	9/28/2017	<2.7	<0.13	-2.6	<3.3	<0.62	<0.12	-0.18	<0.091	<0.18	<0.18	0.08	<0.098	<0.11	<0.18	<0.072	<0.068	<0.067	<0.18	<0.14							
MW-355B	9/28/2017	<2.7	<0.13	-2.6	<3.3	<0.62	<0.12	-0.18	<0.091	<0.18	<0.18	0.08	<0.098	<0.11	<0.18	<0.072	0.13	<0.067	<0.18	<0.14							
MW-356A	9/24/2017	<2.7	<0.13	-2.6	7	7.8	<0.12	-0.18	<0.091	<0.18	<0.18	0.33	<0.098	<0.11	<0.18	<0.072	<0.068	<0.067	6.3	<0.18	<0.14						
MW-356B	9/24/2017	<1.40	<6.5	<3.0	<1.70	<3.1	<6	<8	<6.6	<8	<8	<3.5	<4.8	<5.5	<8	<3.6	<3.4	<3.4	<9	<7							
MW-357A	9/23/2017	<1.4	<0.65	<1.3	<1.7	2.9	<0.6	<0.8	<0.45	<0.8	<0.8	<0.48	<1.29	<0.8	<0.36	<0.34	0.5	<0.9	<0.7								
MW-357B	9/23/2017	<2.7	<0.13	-2.6	5.9	<0.62	<0.12	-0.18	<0.091	<0.18	<0.18	<0.098	<0.98	0.17	1.8	<0.072	<0.068	<0.067	<0.18	<0.14							
MW-358A	9/23/2017	<2.7	<0.13	-2.6	5.3	0.18	<0.12	-0.18	<0.091	<0.18	<0.18	0.1	<0.098	5.6	<0.18	<0.072	0.23	0.11	<0.18	<0.14							
MW-358B	9/6/2017	<1.4	<0.65	<1.3	86	3.1	<0.6	<0.8	<0.46	<0.8	<0.8	<0.48	22	<0.8	<0.36	<0.34	0.5	<0.9	<0.7								
MW-359B	9/26/2017	<2.7	<0.13	-2.6	<3.3	0.82	<0.12	-0.18	<0.091	<0.18	<0.18	0.08	<0.098	<0.11	<0.18	<0.072	0.07	0.2	<0.18	<0.14							
MW-359A	9/24/2017	<2.7	<0.13	-2.6	4.3	<0.62	<0.12	-0.18	<0.091	<0.18	<0.18	0.38	<0.098	<0.11	<0.18	<0.072	<0.068	<0.067	<0.18	<0.14							
MW-359B	9/24/2017	<2.7	<0.13	-2.6	<3.3	<0.62	<0.12	-0.18	<0.091	<0.18	<0.18	0.09	<0.098	<0.11	<0.18	<0.072	<0.068	<0.067	<0.18	<0.14							
MW-360A	9/25/2017	<54	-2.6	<2	<0.6	<1.3	<2.4	<3.2	<1.9	<3.2	<3.2	5.2	<2	<2.2	<3.2	<1.5	<1.4	<1.4	<3.6	<2.8							
MW-361A	9/22/2017	<2.7	<0.13	-2.6	<3.3	0.21	<0.12	-0.18	<0.091	<0.18	<0.18	0.16	<0.098	0.25	<0.18	<0.072	<0.068	0.16	<0.18	<0.14							
MW-361B	9/22/2017	<2.7	<0.13	-2.6	<3.3	0.81	<0.12	-0.18	<0.091	<0.18	<0.18	0.16	<0.098	<0.11	<0.18	<0.072	<0.068	<0.067	<0.18	<0.14							
MW-362A	9/22/2017	5.2	<0.13	-2.6	<3.3	1	<0.12	-0.18	<0.091	<0.18	<0.18	0.17	<0.098	0.46	<0.18	<0.072	<0.068	2.3	<0.18	<0.14							
MW-362B	9/22/2017	<2.7	<0.13	-2.6	<3.3	0.48	<0.12	-0.18	<0.091	<0.18	<0.18	0.08	<0.098	0.3	<0.18	<0.072	<0.068	1.4	<0.18	<0.14							
MW-363A	9/22/2017	<2.7	<0.13	-2.6	5	1.1	<0.12	-0.18	<0.091	<0.18	<0.18	0.17	<0.098	0.52	<0.18	<0.072	<0.068	2.8	<0.18	<0.14							
MW-363B	9/22/2017	<1.4	<0.65	<1.3	<17	1.4	<0.8	<0.46	<0.8	<0.8	<0.48	0.45	<0.48	<0.55	<0.8	<0.36	<0.34	3.9	<0.9	<0.7							
MW-364A	9/21/2017	<1.4	<0.65	<1.3	18	2.3	<0.6	<0.8	<0.46	<0.8	<0.8	0.5	<0.48	<0.55	14	<0.16	<0.36	<0.34	1.9	<0.9	<0.7						
MW-364B	9/21/2017	<1.4	<0.65	<1.3	20	<0.31	<0.6	<0.8	<0.46	<0.8	<0.8	<0.35	<0.48	<0.55	10	<0.16	<0.36	<0.34	<0.34	<0.9	<0.7						
MW-365A	9/22/2017	<1.4	<0.65	<1.3	1.3	0.3	<0.6	<0.8	<0.46	<0.8	<0.8	0.75	<0.48	<0.55	<0.8	<0.36	<0.34	3.1	<0.9	<0.7							
MW-365B	9/22/2017	<1.4	<0.65	<1.3	1.7	<0.31	<0.6	<0.8	<0.46	<0.8	<0.8	0.45	<0.48	<0.55	<0.8	<0.36	<0.34	1	<0.9	<0.7							
MW-366A	9/25/2017	<140	<6.5	<130	<170	<3.1	<6	<8	<4.6	<8	<8	<3.5	<4.8	94	<8	<3.6	<3.4	<3.4	<9	<7							
MW-366B	9/25/2017	<54	-2.6	<52	<06	2.4	<2.4	<3.2	<1.5	<3.2	<3.2	<1.4	<2	<2.2	<3.2	<1.5	<1.4	2.6	<3.6	<2.8							
MW-367A	9/25/2017	<27	<1.3	<26	<33	2.7	<1.2	<1.6	<0.91	<1.6	<1.6	1.8	<0.96	6.5	<1.6	<0.72	<0.68	<0.67	<1.8	<1.4							
MW-367B	9/26/2017	<27	<1.3	<26	<33	3.1	<1.2	<1.6	<0.91	<1.6	<1.6	0.7	<0.96	5.5	<1.6	<0.72	<0.68	<0.67	<1.8	<1.4							
MW-368A	9/23/2017	<2.7	<0.13	-2.6	<3.3	3.6	<0.12	-0.18	<0.091	<0.18	<0.18	0.48	<0.098	76	<0.18	<0.16	<0.072	<0.068	0.42	<0.18	<0.14						
MW-368B	9/23/2017	<2.7	<0.13	-2.6	<3.3	2.9	<0.12	-0.18	<0.091	<0.18	<0.18	0.1	<0.098	229	<0.18	<0.16	<0.072	<0.068	0.4	<0.18	<0.14						
MW-369A	9/23/2017	<1.4	<0.65	<1.3	<17	0.2	<0.6	<0.8	<0.46	<0.8	<0.8	0.8	<0.48	<0.55	<0.8	<0.36	<0.34	9.9	<0.9	<0.7							
MW-369B	9/23/2017	<2.7	<0.13	-2.6	<33	1	<1.2	<1.6	<0.91	<1.6	<1.6	0.69	<0.96	<1.1	<1.6	<0.72	<0.68	<0.67	<1.8	<1.4							
MW-370A	9/30/2017	<2.7	<0.13	-2.6	149	0.7	<1.2	<1.5	<0.91	<1.5	<1.5	0.69	<0.96	<1.1	<1.6	<0.72	<0.68	<0.67	<1.8	<1.4							
MW-370B	9/30/2017	<2.7	<0.13	-2.6	<33	0.53	<0.12	-0.18	<0.091	<0.18	<0.18	0.18	<0.098	0.86	<0.18	<0.072	<0.068	3.3	<0.18	<0.14							
MW-371A	9/21/2017	<2.7	<0.13	-2.6	<33	0.12	<0.12	-0.18	<0.091	<0.18	<0.18	0.18	<0.098	0.96	<0.18	<0.072	<0.068	<0.09	<0.18								
MW-371B	9/20/2017	<27	<1.3	<26	<33	1.5	<1.2	<1.5	<0.91	<1.5	<1.5	1.2	<0.96	<1.1	<1.6												

**Table 1b. Site-wide Groundwater Sampling Results- VOCs**

2018-2019

**Table 1b. Site-wide Groundwater Sampling Results- VOCs**

2018-2019

**Table 1b. Site-wide Groundwater Sampling Results- VOCs**

2018-2019

Table 1c. Site-wide Groundwater Sampling Results- PAHs

2017

Location	Date Sampled	1-naphthalene	2-methylnaphthalene	Acenaphthene	Acenaphthylene	Acenaphthrene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluorene	Fluoranthene	Indeno(1,2,3)-perylene	Pyrene	Phenanthrene	Phenanthrene	Phenanthrene	
		(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	
HWEast1	9/27/2017	0.065	0.049	0.036	<0.0067	0.051	0.047	<0.0247	<0.0245	<0.032	<0.033	<0.037	<0.028	<0.11	0.021	<0.029	0.011	0.009	0.0087		
HWEast2	9/27/2017	0.087	0.026	0.038	<0.078	<0.024	<0.0219	<0.0247	<0.0245	<0.032	<0.033	<0.037	<0.028	<0.11	0.022	<0.029	0.011	0.007	<0.058		
HWEast3	9/27/2017	0.047	0.018	0.014	<0.036	<0.038	<0.028	<0.0245	<0.0243	<0.031	<0.032	<0.036	<0.027	<0.11	0.042	<0.028	0.021	0.006	<0.056		
HWEast4	9/27/2017	1.2	1.3	0.27	<0.042	0.091	<0.028	<0.045	<0.043	<0.031	<0.032	<0.036	<0.027	<0.11	0.41	<0.028	0.96	0.035	0.012		
HWEast5	9/27/2017	0.26	0.3	0.063	<0.037	<0.024	<0.029	<0.047	<0.045	<0.032	<0.033	<0.037	<0.028	<0.11	0.13	<0.029	0.12	0.021	0.017		
HWEast6	9/27/2017	0.067	0.035	<0.048	<0.037	0.011	0.034	<0.047	<0.045	<0.032	<0.033	<0.037	<0.028	<0.11	0.071	<0.029	0.29	<0.055	<0.058		
HWWest1	9/30/2017	0.063	0.017	<0.045	<0.035	0.042	<0.027	<0.044	<0.042	<0.03	<0.031	<0.035	<0.026	<0.11	<0.039	<0.027	0.13	<0.051	0.056		
HWWest2	9/30/2017	0.041	0.021	<0.049	<0.038	0.038	<0.029	<0.048	<0.046	<0.033	<0.034	<0.038	<0.028	<0.12	<0.043	<0.029	0.84	<0.056	0.017		
HWWest3	9/30/2017	0.044	0.017	<0.049	<0.038	0.037	<0.029	<0.048	<0.046	<0.033	<0.034	<0.038	<0.028	<0.12	<0.043	<0.029	0.66	<0.056	0.019		
HWWest4	9/30/2017	0.1	0.03	<0.045	<0.035	<0.037	<0.027	<0.044	<0.042	<0.03	<0.031	<0.035	<0.026	<0.11	<0.039	<0.027	0.84	<0.055	0.012		
HWWest5	9/30/2017	0.29	0.032	<0.048	<0.037	<0.011	<0.029	<0.047	<0.045	<0.032	<0.033	<0.037	<0.028	<0.11	<0.042	<0.029	0.58	<0.055	<0.058		
HWWest6	9/30/2017	0.57	0.076	<0.048	<0.037	<0.015	<0.029	<0.047	<0.045	<0.032	<0.033	<0.037	<0.028	<0.11	0.099	<0.029	0.46	0.055	<0.058		
MW-101A	9/22/2017	<0.035	<0.023	0.013	0.19	0.27	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	0.015	<0.053	<0.053		
MW-101B	9/22/2017	<0.035	<0.023	<0.044	<0.034	0.026	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	<0.05	<0.053	<0.053		
MW-101C	9/22/2017	<0.035	0.026	<0.044	<0.034	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	0.072	0.052	<0.053		
MW-101D	9/22/2017	<0.035	<0.023	<0.044	<0.034	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	<0.05	<0.053	<0.053		
MW-102A	9/7/2017	<0.035	<0.023	<0.044	<0.034	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	0.12	0.005	<0.053		
MW-102B	9/7/2017	<0.035	0.067	<0.044	<0.034	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	0.11	<0.05	<0.053		
MW-102C	9/7/2017	<0.035	<0.023	<0.044	<0.034	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	0.02	<0.05	<0.053		
MW-103A	9/7/2017	<0.035	<0.023	<0.044	<0.034	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	<0.038	<0.05	<0.053		
MW-103B	9/7/2017	<0.035	<0.023	<0.044	<0.034	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	0.25	<0.05	<0.053		
MW-104A	9/7/2017	0.094	0.016	0.26	0.31	0.33	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	0.12	0.005	<0.053		
MW-104C	9/7/2017	0.052	0.022	0.31	0.25	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.1	<0.038	<0.026	0.39	<0.05	<0.053		
MW-105A	9/7/2017	5	0.16	1.2	0.13	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.27	0.55	<0.026	1.5	<0.05	0.08		
MW-105B	9/7/2017	2.4	0.59	1.7	<0.034	<0.018	0.13	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.05	1.2	<0.026	8	<0.025	<0.07		
MW-105C	9/7/2017	0.076	0.045	1.9	0.2	0.25	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.05	0.28	<0.026	0.62	0.022	<0.051		
MW-106A	9/21/2017	55	40	1.7	<0.44	0.31	<0.13	<0.022	<0.021	<0.015	<0.015	<0.017	<0.025	<0.05	2	<0.013	50	1.9	0.11		
MW-106B	9/21/2017	0.11	0.12	0.03	<0.024	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.31	<0.026	0.43	<0.05	<0.053		
MW-106C	9/21/2017	<0.035	<0.023	<0.044	<0.034	<0.036	0.049	<0.0243	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.298	<0.026	0.93	<0.05	<0.053		
MW-107A	9/21/2017	<0.035	<0.023	<0.044	<0.034	0.079	0.051	<0.0243	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.098	<0.026	<0.038	<0.05	<0.053		
MW-107B	9/21/2017	<0.035	<0.023	<0.044	<0.034	0.028	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.038	<0.026	0.17	<0.05	<0.053		
MW-107C	9/21/2017	<0.035	<0.023	<0.044	<0.034	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.038	<0.026	<0.038	<0.05	<0.053		
MW-108A	9/21/2017	0.043	0.011	<0.044	<0.034	<0.029	<0.013	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.038	<0.026	<0.026	<0.053	<0.053		
MW-108B	9/21/2017	<0.035	<0.023	<0.044	<0.034	0.037	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.038	<0.026	0.27	<0.055	<0.053		
MW-108C	9/21/2017	0.0072	0.0089	<0.044	<0.034	<0.036	0.031	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.038	<0.026	0.016	0.094	<0.053		
MW-109B	9/21/2017	0.042	0.0045	<0.044	<0.034	<0.036	0.043	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.038	<0.026	<0.038	0.023	<0.053		
MW-109A	9/23/2017	6.3	10	0.56	0.4	0.3	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.14	13	<0.05	<0.053		
MW-109B	9/23/2017	2.6	3.8	0.28	0.042	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.038	<0.026	17	<0.05	<0.053		
MW-109C	9/23/2017	0.063	<0.044	<0.034	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.038	<0.026	<0.026	0.044	<0.05	<0.053		
MW-110A	9/6/2017	100	27	0.18	0.1	<0.029	<0.048	<0.046	<0.033	<0.028	<0.034	<0.028	<0.012	0.6	<0.029	420	<0.056	<0.059	<0.059		
MW-110B	9/6/2017	21	41	1	0.14	0.065	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	1.1	<0.026	8.4	0.35	0.01		
MW-111A	9/7/2017	28	46	0.17	0.033	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.048	<0.026	0.099	<0.026	170	0.17	0.032
MW-111B	9/7/2017	16	17	0.59	0.14	0.085	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.97	<0.026	16	0.024	<0.053	<0.053	
MW-111C	9/7/2017	0.018	0.0063	<0.044	<0.034	<0.036	<0.026	<0.043	<0.041	<0.029	<0.03	<0.034	<0.025	<0.01	0.038	<0.026	0.045	0.073	<0.053		
MW-112A	9/6/2017	13	5.1	0.2	0.02	0.68	0.5	<0.017	0.11	0.042	0.021										

Table 1c. Site-wide Groundwater Sampling Results- PAHs

2017

Location	Date Sampled	1-Naphthalene <0.003	2-Methylphenanthrene <0.003	Acenaphthene <0.003	Acenaphthylene <0.003	Acenaphthylene <0.003	Benzanthracene <0.003	Benzofluoranthene <0.003	Benzofluoranthene <0.003	Benzofluoranthene <0.003	Benzofluoranthene <0.003	Chrysene <0.003	Dibenz(a,h)anthracene <0.003	Dibenz(a,h)anthracene <0.003	Fluorene <0.003	Fluorene <0.003	Indeno(1,2,3)-diphenanthrene <0.003	Indeno(1,2,3)-diphenanthrene <0.003	Pyrene <0.003	
MW-351A	9/30/2017	<0.0036	<0.0024	0.062	<0.0035	0.011	<0.0027	<0.0044	<0.0042	<0.003	<0.0031	<0.0035	<0.0026	<0.011	<0.0039	<0.0027	<0.0039	<0.0051	<0.0054	
MW-351B	9/30/2017	<0.0039	<0.0029	0.075	<0.0038	0.038	<0.0029	<0.0048	<0.0045	<0.0033	<0.0034	<0.0028	<0.028	<0.012	<0.0043	<0.029	<0.014	<0.0056	0.0066	
MW-352A	10/1/2017	15	8.5	0.76	0.93	0.2	<0.028	<0.0046	<0.0044	0.19	<0.0032	<0.0037	<0.0027	0.064	1.2	<0.0028	12	2.2	0.22	
MW-352B	10/1/2017	0.92	0.55	0.086	<0.037	<0.004	0.42	0.12	0.15	0.22	0.13	0.096	0.23	0.03	0.033	0.23	4.6	<0.0055	0.035	
MW-352D	10/1/2017	<0.0039	<0.0026	<0.0049	<0.0038	<0.004	<0.0029	<0.0048	<0.0046	0.022	<0.0034	<0.0038	0.021	<0.012	<0.0043	0.022	0.0089	<0.0056	<0.0059	
MW-353A	9/25/2017	2.8	2.3	0.46	<0.023	0.11	<0.026	<0.0043	<0.0041	<0.0039	<0.003	<0.0034	<0.0025	<0.01	0.16	<0.0026	15	0.03	<0.0053	
MW-353B	9/25/2017	3	0.5	0.17	<0.017	0.077	<0.013	0.063	0.093	<0.015	<0.015	<0.017	<0.013	0.05	<0.29	<0.013	6.1	0.047	0.11	
MW-354A	9/5/2017	0.34	0.11	0.48	<0.02	0.006	<0.0037	<0.011	<0.0083	<0.0086	<0.0094	<0.00076	<0.0013	0.031	0.18	<0.0089	2.6	0.015	0.01	
MW-354B	9/5/2017	0.025	<0.0013	<0.0012	<0.0011	<0.00082	0.003	<0.011	<0.0083	<0.0014	<0.0094	<0.00076	<0.0013	<0.0082	<0.011	<0.0089	0.018	<0.0011	0.008	
MW-355A	9/28/2017	<0.0035	<0.0023	<0.0044	<0.0034	<0.0036	0.097	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	<0.038	<0.0026	<0.0038	<0.005	<0.0053	
MW-355B	9/28/2017	<0.0035	<0.0023	<0.0044	<0.0034	<0.0036	0.097	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	<0.038	<0.0026	<0.0038	<0.005	<0.0053	
MW-356A	9/24/2017	39	50	2	<0.47	1.4	1.7	1.3	0.99	0.73	<0.015	2.3	0.21	1	3.1	0.33	63	7.4	5.4	
MW-356B	9/24/2017	8.4	7.9	0.28	<0.053	0.15	0.027	0.043	0.081	0.027	<0.003	0.028	0.096	0.18	0.22	0.023	7.9	0.19	0.096	
MW-357A	9/23/2017	9.2	8.7	0.96	<0.043	0.061	<0.026	0.011	0.011	0.074	<0.003	<0.0034	<0.0025	0.028	0.48	<0.0026	15	0.097	0.037	
MW-357B	9/23/2017	0.0068	0.0043	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	<0.0038	<0.0026	0.02	0.0073	<0.0053	
MW-358A	9/6/2017	0.013	0.0079	0.0075	0.0056	<0.0082	0.002	<0.011	<0.0083	<0.0086	<0.0094	<0.00076	<0.0013	<0.0082	0.111	<0.0089	0.022	0.0099	<0.001	
MW-358B	9/6/2017	4.7	2.9	0.17	<0.014	0.02	0.016	0.013	0.02	0.039	0.033	<0.0076	<0.0013	<0.0082	0.044	0.027	29	0.024	0.016	
MW-358D	9/6/2017	0.0229	0.0036	<0.0012	<0.0011	<0.0082	0.0016	<0.011	<0.0083	<0.0086	<0.0094	<0.00076	<0.0013	<0.0082	0.029	<0.0089	0.019	0.0044	<0.001	
MW-359A	9/24/2017	<0.0035	0.0032	<0.0044	<0.0034	0.088	<0.0038	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	<0.038	<0.0026	0.005	0.0076	<0.0053	
MW-359B	9/24/2017	1.1	0.81	0.063	<0.034	0.066	<0.028	0.075	0.014	0.004	<0.003	<0.0034	<0.0025	<0.01	<0.038	0.032	1.2	0.074	0.0076	
MW-360D	9/25/2017	0.11	0.1	0.0988	<0.0034	<0.0036	<0.0026	0.0083	0.016	0.012	0.0097	<0.0034	<0.0025	<0.01	0.013	0.0073	0.06	0.012	<0.0053	
MW-501A	9/22/2017	0.18	0.021	2.2	<0.027	<0.036	<0.026	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	0.37	<0.0026	0.38	<0.005	<0.0053	
MW-501B	9/22/2017	1.1	0.33	0.23	<0.0065	0.013	<0.0026	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	0.62	<0.0026	9.5	0.013	<0.0053	
MW-502A	9/22/2017	39	42	0.19	0.13	0.11	<0.005	<0.0041	<0.0046	0.006	<0.003	<0.0034	<0.0025	<0.025	4.2	<0.0026	97	1.5	0.078	
MW-502B	9/22/2017	15	15	8.7	<0.15	0.5	<0.026	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	<0.038	0.032	1.2	0.074	0.0076	
MW-503A	9/22/2017	0.95	0.4	0.8	<0.12	0.069	<0.026	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	0.92	<0.0026	0.6	0.044	0.04	
MW-503B	9/22/2017	0.92	0.25	0.85	<0.089	0.11	<0.027	0.037	0.021	0.034	<0.0029	0.003	<0.0025	<0.01	0.76	<0.0026	0.23	0.095	0.17	
MW-504A	9/21/2017	7.3	2.6	0.69	<0.11	0.11	<0.028	0.0097	0.011	0.014	<0.003	<0.0034	<0.0024	<0.01	0.69	<0.0099	6	0.13	0.054	
MW-504B	9/21/2017	2.6	0.46	0.15	<0.0085	0.027	<0.0026	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	0.69	<0.0099	4	0.025	<0.0053	
MW-505A	9/22/2017	12	2.2	0.78	<0.13	0.12	0.039	0.032	0.029	0.025	<0.003	<0.0034	<0.0025	<0.01	0.63	<0.0026	1.2	0.012	0.25	0.12
MW-505B	9/22/2017	1.9	0.54	0.16	<0.0054	0.027	0.017	0.011	0.017	0.0063	<0.003	<0.0034	<0.0025	<0.01	0.13	<0.0054	8.7	0.061	0.037	
MW-506A	9/25/2017	4.7	3.5	0.66	0.061	0.11	0.026	0.017	0.018	0.017	<0.003	<0.0037	<0.0025	<0.01	0.37	<0.008	19	0.088	0.048	
MW-506B	9/25/2017	0.23	0.03	0.38	<0.043	0.086	0.026	0.054	0.096	0.026	0.015	<0.003	<0.0036	<0.0027	<0.017	0.036	0.023	0.082	0.1	
MW-507A	9/26/2017	3.5	1.5	0.21	<0.03	0.12	<0.0028	0.018	0.026	0.0091	<0.0032	<0.0036	<0.0025	<0.011	0.04	<0.009	4.5	<0.0053	0.015	
MW-507B	9/26/2017	2.1	0.36	0.15	<0.024	0.11	<0.0028	0.018	0.026	0.0091	<0.0032	<0.0036	<0.0025	<0.01	0.17	<0.0026	12	<0.005	<0.0053	
MW-508A	9/23/2017	4.2	2.7	0.63	<0.022	0.078	<0.0026	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	0.92	<0.0026	0.6	0.044	0.04	
MW-508B	9/23/2017	2	0.56	0.093	<0.017	0.069	<0.013	<0.022	0.074	<0.015	<0.015	<0.017	<0.013	<0.01	0.16	<0.013	7.3	0.054	0.072	
MW-509A	9/23/2017	1.4	0.81	1.3	1.4	0.11	<0.026	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	0.78	<0.0026	10	0.022	0.029	
MW-509B	9/23/2017	8.8	2.3	0.23	<0.028	<0.018	<0.013	0.1	0.16	0.054	0.034	<0.017	<0.013	<0.05	0.21	0.043	7.9	<0.025	0.18	
MW-510A	9/25/2017	1.1	0.12	0.83	<0.086	0.26	<0.013	<0.022	<0.021	<0.015	<0.015	<0.017	<0.013	<0.05	0.45	<0.013	0.76	<0.025	<0.027	
MW-510B	9/25/2017	1.3	0.21	0.076	<0.038	<0.036	<0.026	0.017	0.035	0.014	0.01	<0.0034	<0.0058	<0.02	0.062	0.012	4.3	0.041	0.033	
MW-511A	9/25/2017	0.23	0.015	1	<0.021	0.06	<0.026	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	0.47	<0.0026	9.7	0.052	<0.0053	
MW-511B	9/25/2017	2.3	0.32	0.17	<0.017	0.029	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	0.97	<0.0026	1.3	0.039	<0.0053		
MW-512A	9/26/2017	1.9	1.5	0.15	0.025	<0.028	<0.0045	<0.0043	<0.0031	<0.0036	<0.0027	<0.011	0.34	<0.0028	8.5	0.026	<0.0056			
MW-512B	9/26/2017	2.1	0.059	0.14	<0.075	0.04	<0.026	<0.0043	<0.0041	<0.0029	<0.003	<0.0034	<0.0025	<0.01	0.048	<0.0026	0.055	0.017	<0.0053	
MW-513A	9																			

Table 1c. Site-wide Groundwater Sampling Results- PAHs

2018-2019

Location	Date Sampled	1,4-Dioxane (ppm)	2-Methylphenol (ppm)	Acenaphthene (ppm)	Acenaphthylene (ppm)	Acenaphthalene (ppm)	Acenaphthalene Sulfoxide (ppm)	Acenaphthalene Sulfone (ppm)	Benz(a)anthracene (ppm)	Benz(a)anthracene Sulfoxide (ppm)	Benz(a)anthracene Sulfone (ppm)	Biphenyl (ppm)	Chrysene (ppm)	Cyclopenta[ghi]phenanthrene (ppm)	Dibenz(a,h)anthracene (ppm)	Dibenzofuran (ppm)	Fluorene (ppm)	Fluoranthene (ppm)	Indeno[1,2,3]- perylene (ppm)	Naphthalene (ppm)	Phenanthrene (ppm)	Pyrene (ppm)
HWEast1	9/28/2018	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	
HWEast2	9/28/2018	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	
HWEast3	9/28/2018	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	
HWEast4	9/28/2018	0.1	0.2	<0.05	<0.05	<0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	
HWEast5	9/28/2018	0.3	0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.2	<0.2	<0.05	
HWEast6	9/28/2018	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	
HWWest1	9/26/2018	0.06	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.1	<0.05	<0.01	
HWWest2	9/27/2018	0.08	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.3	<0.2	<0.05	
HWWest3	9/27/2018	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	0.06	
HWWest4	9/27/2018	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	
HWWest5	9/26/2018	0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.05	<0.01	
MW-105A	9/22/2018	2	0.05	1	0.1	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.03	0.4	<0.01	0.7	0.04	0.03	0.03	<0.01	
MW-105B	9/22/2018	2	0.6	2	0.07	0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	1	<0.01	19	<0.03	<0.01				
MW-105C	9/22/2018	0.03	0.02	0.8	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.03	<0.01	0.2	<0.03	<0.01			
MW-112A	9/22/2018	12	9	1	0.2	0.9	2	0.7	0.5	0.3	0.1	2	0.09	0.7	0.6	0.2	9	2	4			
MW-112B	9/22/2018	0.4	0.4	<0.01	<0.01	0.05	0.01	0.05	0.08	0.04	0.02	<0.01	<0.01	<0.01	0.03	2	<0.03	0.03				
MW-112C	9/22/2018	0.2	0.03	0.02	0.02	0.07	0.4	0.3	0.2	0.1	0.05	0.4	0.04	0.07	0.01	0.07	0.02	0.04	0.6			
MW-113A	9/22/2018	4	3	1	0.2	0.5	0.05	0.02	0.01	<0.01	<0.01	0.05	<0.02	0.1	0.8	<0.01	3	1	0.4			
MW-113B	9/22/2018	0.5	0.4	0.2	0.04	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.1	0.09	<0.01						
MW-113C	9/22/2018	0.1	<0.02	<0.01	<0.01	0.1	0.03	0.02	0.05	0.02	0.02	<0.02	0.06	<0.01	0.02	26	<0.03	0.05				
MW-115A	9/23/2018	0.6	0.3	0.2	<0.01	0.01	0.02	0.01	0.03	0.01	<0.01	<0.01	<0.02	0.03	0.1	<0.01	0.2	0.06	0.04			
MW-115B	9/23/2018	2	2	0.2	0.07	0.05	0.02	0.04	0.02	<0.01	<0.01	<0.02	0.02	0.2	0.02	0.9	0.1	<0.06				
MW-115C	9/23/2018	0.9	0.6	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	5	<0.03	<0.01				
MW-115D	9/23/2018	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.03	<0.03	<0.01				
MW-351A	9/25/2018	<0.01	<0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.03	<0.03	<0.01				
MW-351B	9/25/2018	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.03	<0.03	<0.01				
MW-352A	9/26/2018	0.6	0.2	2	0.1	0.2	0.02	<0.01	<0.01	0.01	<0.01	0.02	0.03	0.04	0.6	<0.01	2	0.3	0.06			
MW-352B	9/26/2018	2	0.8	0.09	0.02	0.04	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.03	0.04	<0.01	5	0.1	0.04			
MW-352D	9/26/2018	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.03	<0.03	<0.01				
MW-353A	9/24/2018	2	2	0.3	<0.01	0.06	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.03	0.04	<0.01	26	0.06	0.03	0.03		
MW-353B	9/24/2018	11	1	0.2	0.07	0.06	0.04	0.02	0.06	0.08	0.04	0.02	0.02	0.08	0.02	0.02	3	0.05	0.05			
MW-354A	9/24/2018	0.2	0.07	0.2	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.01	<0.01	<0.01	<0.01	<0.01	12	0.04	0.03	
MW-354B	9/24/2018	7	0.5	0.4	0.06	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.07	0.09	<0.01	1	<0.03	<0.01			
MW-355A	9/25/2018	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.03	<0.03	<0.01				
MW-355B	9/25/2018	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.03	<0.03	<0.01				
MW-356A	9/24/2018	33	52	2	0.4	1	2	1	0.9	0.7	0.2	0.02	1	2	0.3	57	6	6	6			
MW-356B	9/24/2018	5	6	0.2	0.05	0.09	0.05	0.04	0.08	0.03	0.02	0.06	<0.02	0.1	0.2	0.02	6	0.2	0.09	0.04		
MW-357A	9/24/2018	6	2	0.7	<0.01	0.05	0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	0.02	0.4	<0.01	12	0.09	0.04			
MW-357B	9/24/2018	0.6	0.09	0.06	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.03	<0.01	2	<0.03	0.01				
MW-358A	9/25/2018	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.01	0.03	<0.03	<0.01				
MW-358B	9/25/2018	3	1	0.1	<0.01	0.06	0.01	<0.01	0.02	0.05	0.02	0.05	0.02	0.07	<0.01	0.01	17	0.05	0.02			
MW-358D	9/25/2018	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.01	0.08	<0.03	<0.01				
MW-358D	9/25/2018	0.02	0.02	<0.01	<0.01	0.04	0.03	0.08	0.06	0.04	0.06	0.04	0.02	0.07	<0.01	0.01	0.08	<0.03	<0.01			
MW-361A	1/15/2019	0.3	1	0.03	0.2	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.02	0.2	<0.01	0.3	2	0.02	0.02		
MW-361B	1/15/2019	0.06	0.05	0.03	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.03	0.03	<0.01	0.1	0.1	0.06	0.05		
MW-362A	1/15/2019	0.08	0.05	0.1	0.02	0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.02	0.1	<0.01	0.1	0.06	0.05			
MW-362B	1/15/2019	0.1	0.09	0.07	0.02	0.06	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.02	0.06	<0.01	0.04	0.06	0.05			
MW-501A	9/23/2018	0.05	<0.02	1	0.03	<0.01	<0.01	<0.01														

**Table 1d. Site-wide Groundwater Sampling Results- Water Quality Parameters**

**2017**

Location	Date Sampled	pH, field (STU)	pH, lab (STU)	Conductivity, field (mS/cm)	ORP (mV)	Dissolved Oxygen, field (mg/L)	Alkalinity (mg/L)	Total Dissolved Solids (mg/L)
EW-1	10/2/2017	6.42	7.1	13	-187	0.51	3500	8300
EW-2	10/2/2017	6.41	7.0	5.75	-170	0.62	3400	5700
EW-3	10/2/2017	6.77	7.2	11.8	-249	0.96	13000	7800
EW-4	10/2/2017	6.79	7.6	6.95	-173	0.6	17000	3000
EW-5	10/2/2017	9.4	9.4	51.3	-444	0.5	2400	44000
EW-6	10/1/2017	8.94	8.9	41.4	-382	0.48	15000	33000
EW-8	10/1/2017	6.62	7.3	9.97	-259	0.56	5000	6900
EW-9	10/1/2017	6.58	7.2	8.01	-261	0.58	5300	7200
EW-10	10/1/2017	7.05	7.8	0.324	-149	0.69	2100	250
EW-11	10/1/2017	6.3	7.0	15.3	-262	0.45	3500	10000
HWEast1	9/27/2017	6.75	7.4	14.8	-139	0		
HWEast2	9/27/2017	6.63	7.4	12.7	-102	0		
HWEast3	9/27/2017	6.87	7.5	7.39	-100	0.69		
HWEast4	9/27/2017	7.54	8.0	60.5	-272	0		
HWEast5	9/27/2017	9.9	10.1	1.77	-385	0.41		
HWEast6	9/27/2017	6.19	7.3	1.2	-223	0		
HWWest1	9/30/2017	9.21	9.0	24.4	-365	0		
HWWest2	9/30/2017	11.43	10.9	53	-280	2.4		
HWWest3	9/30/2017	11.42	10.9	51.4	-270	3.97		
HWWest4	9/30/2017	10.75	10.3	51.2	-394	0		
HWWest5	9/30/2017	6.71	7.5	28.9	-209	1.56		
HWWest6	9/30/2017	6.97	7.6	51.5	120	1.83		
MW-101A	9/22/2017	6.92	8.2	9.46	-270	0		
MW-101B	9/22/2017	7.12	8.3	3.84	-292	0.77		
MW-101C	9/22/2017	7.32	8.3	0.402	-98	1.28		
MW-101D	9/22/2017	9.21	9.3	99999	-152	0		
MW-102A	9/7/2017	7.21	7.4	9.79	-321	0		
MW-102B	9/7/2017	6.81	7.0	4.45	-136	0		
MW-102C	9/7/2017	6.84	7.1	6.14	-127	1.21		
MW-103A	9/7/2017	6.63	6.9	5.29	-358	2.61		
MW-103B	9/7/2017	6.24	6.7	2.88	-293	0		
MW-103C	9/7/2017	6.08	6.4	4.61	-217	0		
MW-104B	9/7/2017	6.17	6.5	0.453	-134	0		
MW-104C	9/7/2017	6.45	6.8	0.308	-205	1.14		
MW-105A	9/7/2017	5.89	6.1	5.62	-142	0		
MW-105B	9/7/2017	6.13	6.4	1.95	-226	0.74		
MW-105C	9/7/2017	6.45	6.8	7.58	-102	0	3100	4200
MW-106A	9/21/2017	6.17	7.0	0.335	-188	0.82		
MW-106B	9/21/2017	5.76	6.9	0.071	-174	1.14		
MW-106C	9/21/2017	8.02	8.1	11.7	-272	0		
MW-107A	9/21/2017	5.88	7.1	0.19	-132	1.7		
MW-107B	9/21/2017	5.46	6.7	0.138	-144	6.32		
MW-107C	9/21/2017	7.32	8.1	0.385	-141	3.23		
MW-108A	9/21/2017	5.75	6.8	1.17	-181	3.72		
MW-108B	9/21/2017	4.73	6.1	0.124	29	0		
MW-108C	9/21/2017	9.68	9.4	0.379	-191	0.74		
MW-108D	9/21/2017	7.48	8.2	0.434	-88	2.79		
MW-109A	9/23/2017	5.45	6.2	0.816	-179	3.13		
MW-109B	9/23/2017	4.48	5.0	6.35	-115	0.67		
MW-109C	9/23/2017	5.62	6.8	14.8	-85	0		
MW-110A	9/6/2017	6.36	5.7	0.51	-323	1.28		
MW-110B	9/6/2017	4.74	7.0	0.181	69	0		
MW-110C	9/6/2017	6.17	6.8	26	-130	0		
MW-111A	9/7/2017	6.59	6.9	6.52	-343	0		
MW-111B	9/7/2017	10.39	10.1	5.7	-322	0		
MW-111C	9/7/2017	6.86	7.3	4.4	-135	0		
MW-112A	9/6/2017	6.36	6.9	5.51	-292	0.59		

**Table 1d. Site-wide Groundwater Sampling Results- Water Quality Parameters**

2017

Location	Date Sampled	pH, field (STU)	pH, lab (STU)	Conductivity, field (mS/cm)	ORP (mV)	Dissolved Oxygen, field (mg/L)	Alkalinity (mg/L)	Total Dissolved Solids (mg/L)
MW-112B	9/6/2017	6.21	6.8	24.4	-115	0		
MW-112C	9/6/2017	10.6	10.0	43	-473	0	4800	30000
MW-113A	9/5/2017	9.58	9.5	0.916	-278	0		
MW-113B	9/5/2017	8.84	8.9	3.57	-288	0		
MW-113C	9/5/2017	8.71	8.4	20.8	-209	1.12	140	23000
MW-114A	9/6/2017	6.29	7.1	0.246	-93	0		
MW-114B	9/6/2017	7.07	7.6	0.442	-90	0.98		
MW-114C	9/6/2017	9.05	8.8	52.2	-263	2.2		
MW-115A	9/23/2017	6.92	7.4	4.16	-280	0.81		
MW-115B	9/23/2017	6.42	7.0	4.05	-227	1.2		
MW-115C	9/23/2017	6.82	7.7	18.7	-132	0.88	540	19000
MW-115D	9/23/2017	10.22	10.1	33.9	-357	1.24		
MW-116A	9/23/2017	5.97	6.4	0.051	-146	0.87		
MW-116B	9/23/2017	6.5	7.5	0.25	-25	0.99		
MW-116C	9/23/2017	7.42	7.8	5.87	-138	0.88		
MW-117A	9/24/2017	5.81	6.7	0.215	-124	0.91		
MW-117B	9/24/2017	4.81	5.9	0.181	-25	0.8		
MW-117C	9/24/2017	5.64	6.4	0.241	-28	0.61		
MW-117D	9/24/2017	6.94	8.0	0.542	-99	0		
MW-131	9/24/2017	9.58	9.4	2.18	-371	0.84		
MW-132	9/27/2017	9.48	9.6	3.09	-409	0.24		
MW-133	9/27/2017	8.87	9.0	6.36	-419	0.21		
MW-135	9/24/2017	9	8.7	4.35	-305	0		
MW-1C	10/3/2017	6.52	7.1	27.9	-219	0	4700	21000
MW-1C	10/23/2017	7.05		28.9	-221	0		
MW-2C	10/3/2017	6.57	7.2	28.2	-204	0.39	4500	21000
MW-2C	10/23/2017	7.1		28.4	-199	0		
MW-301A	10/3/2017	6.55	7.4	30.7	-386	0		
MW-301A	10/23/2017	7.44		32.1	-373	0		
MW-301B	10/3/2017	9	9.0	6.2	-402	0.6		
MW-301B	10/23/2017	9.82		3.93	-376	0		
MW-302	9/28/2017	4.93	4.8	2.95	-122	0.4		
MW-303	9/29/2017	4.4	4.4	0.822	-188	0		
MW-304	9/24/2017	9.28	9.1	13.8	-440	0.64		
MW-305	9/27/2017	7.4	7.9	11.8	-356	0.26		
MW-306B	9/29/2017	11.05	10.6	12.7	-455	0		
MW-307A	9/26/2017	6.99	7.5	0.599	-35	1.34		
MW-307B	9/26/2017	7.85	8.1	3.93	-188	0.26		
MW-308	9/28/2017	6.44	6.9	6.57	-229	0		
MW-309	9/29/2017	5.44	6.0	1.9	-125	0		
MW-310A	9/28/2017	5.31	5.5	7.44	-179	0		
MW-310B	9/28/2017	6.67	7.0	5.3	-100	0.45		
MW-311A	9/29/2017	6.74	6.9	3.28	-306	0		
MW-311B	9/29/2017	6.56	6.9	13.4	-116	0.3		
MW-312A	9/29/2017	6.8	7.3	7.27	-304	0.34		
MW-312B	9/29/2017	7.64	8.0	10.8	-375	0.25		
MW-313A	9/29/2017	7.42	7.6	7.14	-390	0		
MW-313B	9/29/2017	10.44	10.1	7.47	-353	0		
MW-314A	9/25/2017	5.73	6.5	0.268	-75	0.87		
MW-314B	9/25/2017	5.1	5.9	0.162	21	0		
MW-351A	9/30/2017	6.06	6.7	0.183	-156	0		
MW-351B	9/30/2017	8.54	8.7	8.27	-304	0		
MW-352A	10/1/2017	5.87	6.5	1.83	-233	0.65	900	1100
MW-352B	10/1/2017	7.14	7.6	40.2	-214	0.5	16000	31000
MW-352D	10/1/2017	6.59	7.4	7.14	-85	0		
MW-353A	9/25/2017	6.78	7.4	6.79	-303	0.85		
MW-353B	9/25/2017	7.17	8.3	47.6	-378	2.72	570	26000

**Table 1d. Site-wide Groundwater Sampling Results- Water Quality Parameters**

**2017**

Location	Date Sampled	pH, field (STU)	pH, lab (STU)	Conductivity, field (mS/cm)	ORP (mV)	Dissolved Oxygen, field (mg/L)	Alkalinity (mg/L)	Total Dissolved Solids (mg/L)
MW-354A	9/5/2017	6.91	7.6	1.63	-298	1.36		

**Table 1d. Site-wide Groundwater Sampling Results- Water Quality Parameters**

2017

Location	Date Sampled	pH, field (STU)	pH, lab (STU)	Conductivity, field (mS/cm)	ORP (mV)	Dissolved Oxygen, field (mg/L)	Alkalinity (mg/L)	Total Dissolved Solids (mg/L)
MW-354B	9/5/2017	8.26	8.3	24.6	205	0		
MW-355A	9/28/2017	5.55	6.1	0.087	18	0.61		
MW-355B	9/28/2017	5.5	5.9	0.194	-6	0.36		
MW-356A	9/24/2017	9.92	9.6	2.32	-481	0.59		
MW-356B	9/24/2017	9.56	9.1	3.49	-426	0		
MW-357A	9/23/2017	6.62	7.2	8.38	-204	1.25	1600	6000
MW-357B	9/23/2017	6.44	7.8	0.156	-6.4	1.06	150	220
MW-358A	9/6/2017	6.59	7.4	3.48	-303	0		
MW-358B	9/6/2017	10.99	10.7	39.9	-456	0.95	2600	20000
MW-358D	9/6/2017	7.02	7.7	68.2	-128	0		
MW-359A	9/24/2017	6.62	7.4	0.342	-136	0		
MW-359B	9/24/2017	9.47	9.5	6.58	-333	0.83		
MW-360D	9/25/2017	10.36	10.4	42.6	-418	0		
MW-501A	9/22/2017	5.9	7.6	1.31	-145	5.08		
MW-501B	9/22/2017	7.05	8.6	10.9	-160	0.53	0	8400
MW-502A	9/22/2017	6.41	8.2	5.15	-179	0.81	2400	1900
MW-502B	9/22/2017	6.36	8.2	5.41	-67	0	2600	3700
MW-503A	9/22/2017	5.62	6.4	3.02	-158	2.7		
MW-503B	9/22/2017	6.03	7.9	11.4	-204	0.63	680	8300
MW-504A	9/21/2017	6.7	7.3	8.66	-280	1.29	1400	7100
MW-504B	9/21/2017	6.59	7.6	8.1	-144	0.64	2200	5100
MW-505A	9/22/2017	6.44	8.6	10.7	-311	0.99	1100	9000
MW-505B	9/22/2017	6.32	8.5	7.63	-220	0.54	1700	6100
MW-506A	9/25/2017	9.39	9.3	9.35	-447	0.68		
MW-506B	9/25/2017	6.46	7.7	39.4	-222	0		
MW-507A	9/26/2017	6.64	7.2	11.7	-292	1.09		
MW-507B	9/26/2017	7.41	8.2	32.2	-290	0	3700	23000
MW-508A	9/23/2017	6.51	7.2	8.53	-280	0.62		
MW-508B	9/23/2017	6.69	7.6	38.2	-335	0	510	28000
MW-509A	9/23/2017	6.21	7.1	3.7	-202	0.67		
MW-509B	9/23/2017	9.36	9.4	34.8	-459	0		
MW-510A	9/25/2017	6.42	6.8	8.24	-236	0		
MW-510B	9/25/2017	6.92	8.1	17	-257	0.82	680	19000
MW-511A	9/25/2017	6.97	7.8	4.86	-189	0		
MW-511B	9/25/2017	6.67	8.0	11.5	-153	0.43	1700	8100
MW-512A	9/26/2017	6.41	7.3	5.75	-129	0		
MW-512B	9/26/2017	7.21	7.6	14.8	-197	1.01	6700	17000
MW-513A	9/30/2017	6.3	6.7	3.79	-179	0.03	2100	3300
MW-513B	9/30/2017	11.02	10.6	52.3	-394	0	17000	35000
MW-514A	10/1/2017	6.58	7.3	8.91	-112	0	5400	6400
MW-514B	10/1/2017	6.39	7.2	3.81	-82	0.69	1300	2100
MW-515A	9/30/2017	9.95	9.4	8.21	-401	0.86		
MW-515B	9/30/2017	7.66	7.9	10.9	-295	0	2500	10000
MW-516A	10/2/2017	6.52	7.2	6.76	-199	0		
MW-516B	10/2/2017	9.79	9.9	25.2	-3222	0	1300	20000
MW-517A	10/3/2017	9.78	9.6	6.32	-436	0.57	1200	4600
MW-517A	10/24/2017	9.82		5.75	-483	0		
MW-517B	10/3/2017	6.85	7.3	17.7	-253	0.77	4300	14000

**Table 1d. Site-wide Groundwater Sampling Results- Water Quality Parameters****2017**

Location	Date Sampled	pH, field (STU)	pH, lab (STU)	Conductivity, field (mS/cm)	ORP (mV)	Dissolved Oxygen, field (mg/L)	Alkalinity (mg/L)	Total Dissolved Solids (mg/L)
MW-517B	10/24/2017	7.2		17.9	-356	0.64		
MW-518A	10/2/2017	7.34	7.9	6.74	-364	0		
MW-518B	10/2/2017	6.42	7.1	8.12	-163	0	510	7100
MW-519A	10/3/2017	6.83	7.4	4.3	-211	4.48		
MW-519A	10/24/2017	6.86		3.9	-291	0		
MW-519B	10/3/2017	6.6	7.2	32.8	-189	0.74	5500	25000
MW-519B	10/24/2017	6.68		34.6	-257	0		

**Table 1d. Site-wide Groundwater Sampling Results- Water Quality Parameters****2018-2019**

Location	Date Sampled	pH, field (STU)	pH, lab (STU)	Conductivity, field (mS/cm)	ORP (mV)	Dissolved Oxygen, field (mg/L)
HWEast1	9/28/2018	7.17	7.2	13.53	-76.8	0.18
HWEast2	9/28/2018	6.88	7.2	9.32	-84.5	0.87
HWEast3	9/28/2018	7.04	7.2	6.712	-50.3	0.15
HWEast4	9/28/2018	9.13	9.0	21.02	-304.9	0.07
HWEast5	9/28/2018	9.85	9.6	44.23	-387.9	0.01
HWEast6	9/28/2018	6.65	7.0	1.039	-251.5	0.11
HWWest1	9/26/2018	8.55	8.1	16.42	-130.4	0.05
HWWest2	9/27/2018	11.21	10.8	54.72	-268.4	1.72
HWWest3	9/27/2018	11.31	10.8	54.8	-358.6	1.27
HWWest4	9/27/2018	10.94	10.3	47.7	-310.1	0.1
HWWest5	9/26/2018	8.4	8.1	18.64	-262.8	0.04
HWWest6	9/26/2018	7.5	7.7	8.79	-55.5	5.68
MW-105A	9/22/2018	6.06	6.4	0.53	-157.3	0.14
MW-105B	9/22/2018	6.18	6.5	1.85	-96.8	0.04
MW-105C	9/22/2018	6.58	7.0	6.64	-66.7	0.13
MW-112A	9/22/2018	6.48	6.8	4	-256.2	0.08
MW-112B	9/22/2018	6.42	6.7	25.42	-106.6	0.4
MW-112C	9/22/2018	9.49	9.4	42.61	-451.6	0.14
MW-113A	9/22/2018	9.55	9.2	1.05	-218	0.11
MW-113B	9/22/2018	7.6	7.9	3.819	-301.3	0.11
MW-113C	9/22/2018	9.24	9.1	26.94	-431	0.01
MW-115A	9/23/2018	6.99	7.5	2.68	-312	0.04
MW-115B	9/23/2018	6.8	7.0	2.84	-125.2	0.03
MW-115C	9/23/2018	6.82	7.0	21.27	-135.7	0.08
MW-115D	9/23/2018	9.93	9.9	33.66	-356.7	0.1
MW-351A	9/25/2018	5.62	6.2	0.313	-220.4	0.16
MW-351B	9/25/2018	8.26	8.1	6.931	-53.1	0.05
MW-352A	9/26/2018	6.96	7.4	5.44	-154	0.09
MW-352B	9/26/2018	7.07	7.6	35.75	-198	0.06
MW-352D	9/26/2018	6.6	7.2	7.67	-104.8	0.23
MW-353A	9/24/2018	6.61	7.0	5.78	-251.4	0.05
MW-353A	1/9/2019	6.56		5.15	-263.8	0.13
MW-353B	9/24/2018	6.59	7.1	26.12	-343.1	0.03
MW-354A	9/24/2018	6.81	7.1	1.874	-285.6	0.08
MW-354B	9/24/2018	8.02	8.0	32.1	-302.5	0.03
MW-355A	9/25/2018	5.19	5.8	0.282	-105.7	0.51
MW-355B	9/25/2018	6.4	6.9	1.211	-25.6	0.17
MW-356A	9/24/2018	10.17	10.0	2.709	-371.4	0.04
MW-356B	9/24/2018	9.1	8.9	3.173	-206.2	0.04
MW-357A	9/24/2018	6.64	7.0	6.68	-113.6	0.51
MW-357A	10/6/2018	7.07		7.31	-45.7	0.25
MW-357B	9/24/2018	6.81	7.0	4.3	-78.9	0.26
MW-358A	9/25/2018	6.57	7.1	3.42	-292	0.11
MW-358B	9/25/2018	10.59	10.5	27.95	-502	0.05

**Table 1d. Site-wide Groundwater Sampling Results- Water Quality Parameters**

2018-2019

Location	Date Sampled	pH, field (STU)	pH, lab (STU)	Conductivity, field (mS/cm)	ORP (mV)	Dissolved Oxygen, field (mg/l.)
MW-358D	9/25/2018	6.98	7.4	49.25	-156	0.15
MW-359A	9/23/2018	6.82	7.1	0.331	-76.7	0.08
MW-359B	9/23/2018	9.42	9.2	5.087	-303.8	0.08

**Table 1d. Site-wide Groundwater Sampling Results- Water Quality Parameters****2018-2019**

Location	Date Sampled	pH, field (STU)	pH, lab (STU)	Conductivity, field (mS/cm)	ORP (mV)	Dissolved Oxygen, field (mg/L)
MW-360D	9/23/2018	10.34	10.1	39.01	-329.1	0.03
MW-361A	1/15/2019	10.26	9.9	0.91	-270.4	0.42
MW-361B	1/15/2019	10.42	10.1	1.53	-285.3	4.42
MW-362A	1/15/2019	9.2	8.4	0.93	-197.6	0.04
MW-362B	1/15/2019	8.8	8.3	16.14	-405.2	0.01
MW-501A	9/23/2018	6.32	6.7	0.681	-203.4	0.29
MW-501B	9/23/2018	7.06	7.3	9.684	-89.3	0.26
MW-502A	9/23/2018	6.48	6.8	5.122	-232.3	0.8
MW-502B	9/23/2018	6.55	6.9	4.9	0	0.37
MW-503A	9/23/2018	6	6.1	2.948	-65.8	0.3
MW-503B	9/23/2018	6.18	6.5	10.14	-194	0.18
MW-504A	9/22/2018	6.57	6.8	6.932	-161.4	0.27
MW-504B	9/22/2018	6.5	6.9	6.915	-179	0.45
MW-505A	9/22/2018	6.51	6.8	8.113	-312.1	0.53
MW-505B	9/22/2018	6.79	7.0	12.89	-98.3	0.37
MW-506A	1/9/2019	6.78	7.0	8.11	-335.6	0.09
MW-506A	1/11/2019	6.77		8.13	-328.6	0.07
MW-506B	1/9/2019	6.5	6.6	30.31	-270.4	1.36
MW-506B	1/11/2019	6.5		30.27	-281.8	1.29
MW-507A	1/11/2019	6.55		13.87	-248.3	0.14
MW-507B	1/10/2019	6.99	7.1	26.84	-256.6	0.06
MW-507B	1/11/2019	6.98		26.82	-237.6	0.06
MW-508A	9/23/2018	6.8	7.0	8.11	-220.1	0.02
MW-508B	9/23/2018	7.01	7.4	33.62	-351.2	0.07
MW-509A	9/23/2018	6.24	6.6	3.401	-222.9	0.23
MW-509B	9/23/2018	9.36	9.1	32.18	-381.6	0.04
MW-510A	9/26/2018	6.28	6.8	7.62	-175.9	0.04
MW-510B	9/26/2018	6.76	7.2	23.41	-221.7	0.05
MW-511A	9/24/2018	7.01	7.4	3.8	-150.3	0.07
MW-511A	1/10/2019	6.94		3.71	-165.8	0.12
MW-511B	9/24/2018	6.5	7.0	10.41	-123.2	0.08
MW-512A	9/26/2018	6.6	7.1	6.83	-133.4	0.02
MW-512B	9/26/2018	8.7	8.7	17.79	-220.9	0.12
MW-513A	9/25/2018	6.19	6.6	1.93	-179	0.09
MW-513B	9/25/2018	9.99	10.0	33.2	-445	0.02
MW-514A	9/25/2018	7.16	7.1	1.379	-53.5	0.05
MW-514B	9/25/2018	6.8	7.5	5.82	-116.5	0.57
MW-515A	9/27/2018	6.69	7.1	5.17	-171	0.14
MW-515B	9/27/2018	7.38	7.6	18.49	-205.1	0.02
MW-516A	9/27/2018	7.61	7.8	6.41	-356	0.02
MW-516B	9/27/2018	6.73	7.0	8.49	-155	0.03
MW-517A	9/28/2018	9.94	9.7	5.21	-412.3	0.03
MW-517B	9/28/2018	8.55	8.5	16.87	-396.2	0.03
MW-518A	9/27/2018	6.76	7.0	15.13	-290	0.03

**Table 1d. Site-wide Groundwater Sampling Results- Water Quality Parameters****2018-2019**

Location	Date Sampled	pH, field (STU)	pH, lab (STU)	Conductivity, field (mS/cm)	ORP (mV)	Dissolved Oxygen, field (mg/l.)
MW-518B	9/27/2018	7.2	7.4	26.84	-260.2	0.01
MW-519A	9/28/2018	7.03	7.3	3.29	-198	0.02
MW-519B	9/28/2018	6.51	7.0	25.39	-165.7	0.04

**Table 2a. Cell Building Soil Boring Results- Metals (Not Including Mercury)**

Location	Date Sampled	Depth (ft bgs)	Aluminum (mg/kg)	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Calcium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Iron (mg/kg)	Lead (mg/kg)	Magnesium (mg/kg)	Manganese (mg/kg)	Nickel (mg/kg)	Potassium (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Sodium (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
CB1-SB-1	12/1/2018	7	3520	<0.158	<0.471	4.93	<0.248	<0.145	2120	4.3	0.476	1.74	798	3.37	161	5.94	0.657	108	<0.319	<0.172	527	<0.127	1.3	1.62
CB1-SB-1	12/1/2018	8.5	2750	<0.151	1.26	25.9	<0.238	<0.139	1630	2.23	0.533	6.31	2590	16.4	150	17.6	2.75	90.4	0.353	<0.165	911	<0.122	4.56	9.67
CB1-SB-2	12/1/2018	7.5	5200	<0.154	0.507	11.1	<0.243	<0.142	774	3.96	0.494	1.28	1150	3.42	125	13.6	1.79	163	<0.313	<0.168	488	<0.124	2.29	2.95
CB1-SB-2	12/1/2018	9	3380	<0.156	0.578	7.21	<0.245	<0.143	1110	4.22	0.311	2.02	804	8.14	235	6.17	5.47	74.4	<0.315	<0.17	687	<0.125	4.77	3.72
CB1-SB-4	12/1/2018	8.5	4180	<0.159	<0.474	10.2	<0.25	<0.146	7480	4.15	1.94	10.1	1140	6.72	306	9.6	2.11	151	0.527	0.494	403	<0.128	3.53	14.3
CB1-SB-4	12/1/2018	9.5	2200	<0.154	<0.459	6.01	<0.242	<0.141	1310	2.79	<0.149	2.07	745	10	94.5	5.32	1.23	44.9	<0.311	<0.168	505	<0.124	2.47	3.84
CB1-SB-5	11/27/2018	5.5	3650	0.475	<0.482	5	<0.254	<0.148	1270	2.91	0.978	3.66	1020	3.39	95.5	4.24	0.771	186	<0.327	<0.176	530	<0.13	1.94	2.58
CB1-SB-5	11/27/2018	8.5	807	0.357	<0.498	6.84	<0.263	<0.154	1690	1.88	0.169	4.3	1970	50	125	12.6	1.13	59.9	<0.338	<0.182	351	<0.134	2.18	11.4
CB2-SB-1	11/30/2018	4	1680	<0.149	<0.445	7.58	<0.235	<0.137	387	3.27	0.185	6.47	689	23.1	94.9	6.86	1.31	87.7	<0.302	0.194	64	<0.12	1.31	9.15
CB2-SB-1	11/30/2018	7	2970	<0.15	1.12	14.6	<0.237	<0.138	3120	2.51	0.427	10	2340	20.2	253	19.9	3.56	98.4	0.561	<0.164	119	<0.121	4.47	10.1
CB2-SB-2	11/30/2018	7.5	1430	<0.15	<0.448	5.39	<0.237	<0.138	1790	1.66	0.972	3.48	897	2.3	89.6	12.3	0.927	77.8	<0.304	0.639	434	<0.121	0.787	2.82
CB2-SB-2	11/30/2018	9.5	2270	<0.159	<0.475	4.55	<0.251	<0.146	937	1.7	<0.155	1.52	1040	3.88	71.4	9.05	1.14	166	<0.322	<0.174	698	<0.128	1.41	2.33
CB2-SB-3	11/29/2018	6.5	2730	0.245	<0.445	7.75	<0.235	<0.137	2400	1.82	1.91	5.73	1130	2.67	146	27.8	0.951	215	<0.302	0.169	258	<0.12	1.22	2.56
CB2-SB-3	11/29/2018	8.1	3520	<0.156	0.834	4.49	<0.247	<0.144	1310	4.14	0.194	2.06	2350	8.62	74.1	9.08	1.09	46.9	<0.317	<0.171	924	<0.126	1.68	2.5
CB2-SB-4	11/28/2018	8	2260	<0.156	<0.467	10.2	<0.247	<0.144	290	2.03	0.239	3	1050	11.2	144	5.26	0.853	136	<0.317	<0.171	1900	0.138	0.428	8.62
CB2-SB-4	11/28/2018	9.5	4640	<0.155	<0.464	22.9	<0.245	<0.143	3420	2.89	0.533	12.6	3600	286	421	23.6	1.67	64.4	<0.315	0.188	3760	<0.125	1.44	22.7
CB2-SB-5	11/28/2018	6	1300	<0.164	<0.49	3.54	<0.259	<0.151	1100	1.14	0.657	3.38	514	2.3	67.9	3.31	0.39	45.5	<0.332	<0.179	64.9	<0.132	0.898	3.26
CB2-SB-5	11/28/2018	9	308	<0.153	<0.456	2.87	<0.24	<0.14	330	0.787	<0.148	0.673	389	11.6	15	2.5	0.366	30.4	<0.309	<0.166	54.3	<0.123	0.653	1.77
CB2-SB-6	11/29/2018	7.8	3930	<0.158	<0.473	19	<0.25	<0.146	2550	3.51	0.706	9.25	1760	6.92	254	22	1.58	88.1	<0.321	0.27	3280	<0.127	1.42	12.2
CB2-SB-6	11/29/2018	9.5	3880	<0.158	<0.472	8.54	<0.249	<0.146	630	2.11	0.209	3.08	638	2.72	156	2.89	0.282	62.7	<0.32	<0.173	3830	<0.127	0.415	5.39
CB2-SB-7	12/2/2018	9.5	4920	<0.158	<0.471	3.87	<0.249	<0.145	1010	4.66	<0.153	1.66	468	5.31	151	3.52	0.858	81.3	0.343	<0.172	74.5	<0.127	1.61	1.1
SP-SB-1	11/30/2018	7	2810	<0.153	<0.457	26.8	<0.241	<0.141	6780	3.15	0.874	7.19	1530	72	256	15.7	1.89	92.5	<0.31	<0.167	81.6	<0.123	2.18	9.57
SP-SB-1	11/30/2018	9	1660	<0.153	0.556	12.8	<0.241	<0.141	529	2.63	0.298	3.62	2000	41.6	348	9.57	2.95	53.7	<0.31	<0.167	175	<0.123	2.2	13.8

**Table 2b. Cell Building Soil Boring Results- Mercury**

**Cell Building 1**

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
CB1-SB-1	12/1/2018	7	5.4
CB1-SB-1	12/1/2018	8.5	1.9
CB1-SB-1	12/1/2018	13.5	0.26
CB1-SB-1	12/1/2018	19	0.71
CB1-SB-1	12/1/2018	23.5	0.87
CB1-SB-1	12/1/2018	28.5	0.23
CB1-SB-1	12/1/2018	33	0.12
CB1-SB-1	12/1/2018	38	0.08
CB1-SB-1	12/1/2018	43.3	0.39
CB1-SB-1	12/1/2018	48	0.49
CB1-SB-1	12/1/2018	53.3	0.26

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
CB1-SB-2	12/1/2018	7.5	9.5
CB1-SB-2	12/1/2018	9	0.29
CB1-SB-2	12/1/2018	12.5	0.04
CB1-SB-2	12/1/2018	18	0.10
CB1-SB-2	12/1/2018	22.5	5.9
CB1-SB-2	12/1/2018	28.5	1.5
CB1-SB-2	12/1/2018	31.5	0.19
CB1-SB-2	12/1/2018	35.7	0.32
CB1-SB-2	12/1/2018	40.2	0.09
CB1-SB-2	12/1/2018	44	0.28
CB1-SB-2	12/1/2018	48	0.76
CB1-SB-2	12/1/2018	52.5	0.33

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
CB1-SB-4	12/1/2018	8.5	33.4
CB1-SB-4	12/1/2018	9.5	0.06
CB1-SB-4	12/1/2018	12.5	0.14
CB1-SB-4	12/1/2018	17.5	0.01
CB1-SB-4	12/1/2018	23	1.2
CB1-SB-4	12/1/2018	27.5	0.20
CB1-SB-4	12/1/2018	31.7	0.18
CB1-SB-4	12/1/2018	35.3	1.2
CB1-SB-4	12/1/2018	39.5	0.03
CB1-SB-4	12/1/2018	43.8	0.25
CB1-SB-4	12/1/2018	51.5	3.7

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
CB1-SB-5	11/27/2018	5.5	4.2
CB1-SB-5	11/27/2018	8.5	0.46
CB1-SB-5	11/27/2018	13.5	0.32
CB1-SB-5	11/27/2018	17.5	1.67
CB1-SB-5	11/27/2018	22.5	0.86
CB1-SB-5	11/27/2018	27.5	1.41
CB1-SB-5	11/28/2018	32.5	1.04
CB1-SB-5	11/28/2018	37.5	0.53
CB1-SB-5	11/28/2018	42.5	0.37
CB1-SB-5	11/28/2018	47.5	0.49
CB1-SB-5	11/28/2018	52.5	<0.0162

**Cell Building 2**

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
CB2-SB-1	11/30/2018	4	44.3
CB2-SB-1	11/30/2018	7	0.12
CB2-SB-1	11/30/2018	13	0.10
CB2-SB-1	11/30/2018	17.5	0.12
CB2-SB-1	11/30/2018	23	0.62
CB2-SB-1	11/30/2018	28	0.02
CB2-SB-1	11/30/2018	33	0.01
CB2-SB-1	11/30/2018	38.5	0.14
CB2-SB-1	11/30/2018	43.5	0.11
CB2-SB-1	11/30/2018	48.5	0.33
CB2-SB-1	11/30/2018	53.5	0.77

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
CB2-SB-2	11/30/2018	7.5	23.5
CB2-SB-2	11/30/2018	9.5	6.8
CB2-SB-2	11/30/2018	13	1.6
CB2-SB-2	11/30/2018	18	0.39
CB2-SB-2	11/30/2018	22.5	0.03
CB2-SB-2	11/30/2018	27.5	0.24
CB2-SB-2	11/30/2018	33.5	0.12
CB2-SB-2	11/30/2018	38.5	0.03
CB2-SB-2	11/30/2018	43.3	0.02
CB2-SB-2	11/30/2018	49	0.01

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
CB2-SB-3	11/29/2018	6.5	13.6
CB2-SB-3	11/29/2018	8.1	0.14
CB2-SB-3	11/29/2018	9.5	0.14
CB2-SB-3	11/29/2018	18	0.51
CB2-SB-3	11/29/2018	22.5	0.24
CB2-SB-3	11/29/2018	28	0.62
CB2-SB-3	11/29/2018	33	1.1
CB2-SB-3	11/29/2018	38	0.28
CB2-SB-3	11/29/2018	42	0.19
CB2-SB-3	11/29/2018	52.5	183

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
CB2-SB-4	11/28/2018	8	135
CB2-SB-4	11/28/2018	9.5	139
CB2-SB-4	11/28/2018	12.5	16.9
CB2-SB-4	11/28/2018	18.3	23.4
CB2-SB-4	11/28/2018	23	188
CB2-SB-4	11/28/2018	36	23.7

**Salt Plant**

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
SP-SB-1	11/30/2018	7	8
SP-SB-1	11/30/2018	9	0.09
SP-SB-1	11/30/2018	14	0.1
SP-SB-1	11/30/2018	18	1.1
SP-SB-1	11/30/2018	23	7
SP-SB-1	11/30/2018	27.5	2.2
SP-SB-1	11/30/2018	32.5	3.1
SP-SB-1	11/30/2018	37.5	0.37
SP-SB-1	11/30/2018	42.5	0.07
SP-SB-1	11/30/2018	48	0.11
SP-SB-1	11/30/2018	52.5	0.80

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
CB2-SB-7	12/2/2018	9.5	0.23
CB2-SB-7	12/2/2018	13	0.15
CB2-SB-7	12/2/2018	18	0.06
CB2-SB-7	12/2/2018	21.5	0.05
CB2-SB-7	12/2/2018	25.5	0.07
CB2-SB-7	12/2/2018	31	2.1
CB2-SB-7	12/2/2018	36.5	0.13
CB2-SB-7	12/2/2018	41.5	0.33
CB2-SB-7	12/2/2018	46.5	0.01
CB2-SB-7	12/2/2018	51.5	0.01

Location	Date Sampled	Depth (ft bgs)	Mercury (mg/kg)
CB2-SB-8	12/3/2018	8.5	16.3
CB2-SB-8	12/3/2018	12.5	0.07
CB2-SB-8	12/3/2018	17.5	0.03
CB2-SB-8	12/3/2018	22.5	5.2
CB2-SB-8	12/3/2018	28	0.21
CB2-SB-8	12/3/2018	32.5	0.71
CB2-SB-8	12/3/2018	38.5	0.32
CB2-SB-8	12/3/2018	43.5	0.33
CB2-SB-8	12/3/2018	48.5	0.40
CB2-SB-8	12/3/2018	53.5	0.39

**Table 2c. Cell Building Soil Boring Results- PAHs**

**Table 3a. Caustic Brine Pool Profiling**

**Cell Building 1**

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB1-CBP-1	11/28/2018	19.5	210	7.3	964
CB1-CBP-1	11/28/2018	34.5	43.2	26.9	1260
CB1-CBP-1	11/29/2018	45	87.6	166	5200

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB1-CBP-2	12/6/2018	20	1.1	0.68	298
CB1-CBP-2	12/6/2018	35	0.46	8.4	152
CB1-CBP-2	12/6/2018	46	35.4	922	11400

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB1-SB-1	11/30/2018	21	25.8	24.2	2510
CB1-SB-1	11/30/2018	40	21.7	20.9	3130
CB1-SB-1	11/30/2018	49	49.0	1120	8520

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB1-SB-2	11/29/2018	20	0.17	47.7	461
CB1-SB-2	11/29/2018	35	35.6	11.9	588
CB1-SB-2	11/30/2018	47.5	117	2520	288

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB1-SB-4	12/1/2018	20	0.36	<0.5	602
CB1-SB-4	12/1/2018	35	383	65.3	3100
CB1-SB-4	12/1/2018	47	158	72.6	9240

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB1-SB-5	11/28/2018	20	392	29.6	840
CB1-SB-5	11/29/2018	36	39.3	22.3	840
CB1-SB-5	11/29/2018	48	47.8	332	4210

**Cell Building 2**

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB2-SB-1	12/2/2018	20	0.32	0.87	229
CB2-SB-1	12/3/2018	35	22.3	<1.3	2580
CB2-SB-1	12/3/2018	50	465	3040	32700

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB2-SB-2	12/4/2018	22	1.3	1.9	199
CB2-SB-2	12/4/2018	33	1.4	<1.3	977
CB2-SB-2	12/4/2018	49	43.8	<1.3	32000

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB2-SB-3	12/4/2018	18	96.1	<1.3	2870
CB2-SB-3	12/4/2018	29	19.7	3.6	274
CB2-SB-3	12/4/2018	49	7.8	<1.3	28400

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB2-SB-4	12/5/2018	20	7340	407	2320
CB2-SB-4	12/5/2018	35	3040	<1.3	2900
CB2-SB-4	12/5/2018	49	691	9090	47200

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB2-SB-5	12/3/2018	21	5.7	77.7	458
CB2-SB-5	12/3/2018	35	22.4		
CB2-SB-5	12/3/2018	45	26.3		1880

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
CB2-SB-6	12/3/2018	20	5070	13.3	1010
CB2-SB-6	12/3/2018	35.5	151	<1.3	3840
CB2-SB-6	12/4/2018	49	31.7	<1.3	48000

**Salt Plant**

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
SP-CBP-3	12/5/2018	20	38.1	<1.3	1200
SP-CBP-3	12/6/2018	35	5.24	2.0	1490
SP-CBP-3	12/6/2018	50	237	26.5	8660

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
SP-CBP-4	12/1/2018	20	165	<1.3	956
SP-CBP-4	12/1/2018	35	289	14.2	2560
SP-CBP-4	12/1/2018	46	85.9	1920	11400

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
SP-CBP-5	12/1/2018	20.5	258	<1.3	2100
SP-CBP-5	12/2/2018	35	128	2.1	1680
SP-CBP-5	12/2/2018	45	238	9.8	2910

Location	Date Sampled	Depth (ft bgs)	Mercury ( $\mu\text{g/l}$ )	Silica, as SiO <sub>2</sub> ( $\text{mg/l}$ )	Total Dissolved Solids ( $\text{mg/l}$ )
SP-SB-1	12/1/2018	24	182	<0.5	956
SP-SB-1	12/1/2018	35.5	139	<1.3	1880
SP-SB-1	12/1/2018	49	624	13000	50000

**Table 3b. Caustic Brine Pool Profiling- Water Quality Parameters**

**Cell Building 1**

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB1-CBP-1	11/28/2018	19.5	7.56	807	68
CB1-CBP-1	11/28/2018	34.5	8.97	577	-38
CB1-CBP-1	11/29/2018	45	11.4	6280	134

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB1-CBP-2	12/6/2018	20	6.49	532	-14
CB1-CBP-2	12/6/2018	35	5.7	273	20
CB1-CBP-2	12/6/2018	46	12.1	20700	-147

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB1-SB-1	11/30/2018	21	11.4	935	-88
CB1-SB-1	11/30/2018	40	9.9	917	-245
CB1-SB-1	11/30/2018	49	11.8	13040	33

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB1-SB-2	11/29/2018	20	7	721	-44
CB1-SB-2	11/29/2018	35	9.44	526	-112
CB1-SB-2	11/30/2018	47.5	11.9	21500	-140

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB1-SB-4	12/1/2018	20	6.7	651	-25
CB1-SB-4	12/1/2018	35	10.9	1159	-74
CB1-SB-4	12/1/2018	47	11.2	10350	-283

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB1-SB-5	11/28/2018	20	10.8	1273	-47
CB1-SB-5	11/29/2018	36	9.12	233	234
CB1-SB-5	11/29/2018	48	11.7	2500	-25

**Cell Building 2**

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB2-SB-1	12/2/2018	20	6.57	428	15
CB2-SB-1	12/3/2018	35	8.41	1389	-88
CB2-SB-1	12/3/2018	50	12	46500	-250

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB2-SB-2	12/4/2018	22	6.14	423	33
CB2-SB-2	12/4/2018	33	6.94	787	-9
CB2-SB-2	12/4/2018	49	6.53	52900	40

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB2-SB-3	12/4/2018	18	8.74	1930	-156
CB2-SB-3	12/4/2018	29	6.33	450	15
CB2-SB-3	12/4/2018	49	7.94	46500	-55

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB2-SB-4	12/5/2018	20	12.4	3620	14
CB2-SB-4	12/5/2018	35	9.34	2390	32
CB2-SB-4	12/5/2018	49	12.4	51500	-250

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB2-SB-5	12/3/2018	21	5.94	505	12
CB2-SB-5	12/3/2018	35	7.47	2190	-60
CB2-SB-5	12/3/2018	45	9.24	1740	-146

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
CB2-SB-6	12/3/2018	20	9.39	1161	-114
CB2-SB-6	12/3/2018	35.5	8.3	2130	-112
CB2-SB-6	12/4/2018	49	9.38	76000	-12

**Salt Plant**

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
SP-CBP-3	12/5/2018	20	9.62	895	-119
SP-CBP-3	12/6/2018	35	9.39	724	-48
SP-CBP-3	12/6/2018	50	9.69	13740	-173

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
SP-CBP-4	12/1/2018	20	8.04	1209	-38
SP-CBP-4	12/1/2018	35	10.2	2480	-8
SP-CBP-4	12/1/2018	46	11.5	17200	-71

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
SP-CBP-5	12/1/2018	20.5	8.3	1360	-149
SP-CBP-5	12/2/2018	35	6.87	314	18
SP-CBP-5	12/2/2018	45	9.91	2760	-226

Location	Date Sampled	Depth	pH, field	Conductivity, field	ORP
		(ft bgs)	(STU)	(mS/cm)	(mV)
SP-SB-1	12/1/2018	24	7.54	1101	-16
SP-SB-1	12/1/2018	35.5	7.07	1329	42
SP-SB-1	12/1/2018	49	12.4	52000	-264

**Table 4a. K<sub>d</sub> Study Aquifer Matrix Results**

Location	Date Sampled	Mercury ( $\mu\text{g}/\text{kg}$ )	Mercury F-0 ( $\mu\text{g}/\text{kg}$ )	Mercury F-1 ( $\mu\text{g}/\text{kg}$ )	Mercury F-2 ( $\mu\text{g}/\text{kg}$ )	Mercury F-3 ( $\mu\text{g}/\text{kg}$ )	Mercury F-4 ( $\mu\text{g}/\text{kg}$ )	Mercury F-5 ( $\mu\text{g}/\text{kg}$ )	Methyl mercury ( $\mu\text{g}/\text{kg}$ )
MW-361A	1/10/2019	873	1.34	360	447	323	812	29.7	0.668
MW-361B	1/10/2019	1510	<0.22	308	121	66.4	51.2	12.1	0.097
MW-362A	1/10/2019	6630	0.48	1680	1690	317	511	406	3.31
MW-362B	1/9/2019	3710	<0.22	265	230	190	423	40.8	1.68

**Table 4b. Groundwater Results for K<sub>d</sub> Study and Thermodynamic Modeling**

Location	Date Sampled	Chloride (mg/L)	Ferrous Iron (mg/L)	Silica, as SiO <sub>2</sub> (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Total Organic Carbon (TOC) (mg/L)	Hg-(0) (µg/L)	Methyl Mercury (µg/L)
MW-351A	9/25/2018	55	0.264	5.3	12.5	4	2.3		
MW-351B	9/25/2018	1960	1.59	20.5	90.4	2.6	17.2		
MW-352A	9/26/2018	161	2.54	39.9	34.5	<0.7	44.6		
MW-352B	9/26/2018	7420	1.74	114	696	0.93	81.2		
MW-353A	9/24/2018	287	0.118	47.5	<1.5	4	<250		
MW-353B	9/24/2018	6550	1.97	73.9	591	17.1	<2500		
MW-354A	9/24/2018	203	0.038	4.8	9.8	3.8	109		
MW-354B	9/24/2018	9790	<0.015	73.2	740	25.8	793		
MW-355A	9/25/2018	60.2	0.302	3.9	7.7	0.79	1.4		
MW-355B	9/25/2018	337	0.51	2	9.3	0.79	10.7		
MW-356A	9/24/2018	131	1.44	55.9	9.7	2.6	258		
MW-356B	9/24/2018	208	6.69	23.6	8.9	2	463		
MW-357A	9/24/2018	803	6.14	128	17.2	<0.7	<250		
MW-357B	9/24/2018	795	9.95	81.8	30	<0.7	60.8		
MW-358A	9/25/2018	752	0.0837	24.4	4.3	8.1	54.7		
MW-358B	9/25/2018	7580	0.54	<1	457	31			
MW-358B	9/27/2018						407		
MW-361A	1/15/2019	12.9	9.01	19.1	34.3	1.7	19.7	<8.0E-5	0.005
MW-361B	1/15/2019	301	14.1	33.7	32.6	<2.8	8.4	<8.0E-5	0.006
MW-362A	1/15/2019	26.5	1.81	37.7	18.9	<0.7	47.4	<8.0E-5	0.03
MW-362B	1/15/2019	4570	29.8	27.7	259	<14	359	0.0001	0.08
MW-506A	1/9/2019								0.02
MW-506B	1/9/2019								0.04
MW-507A	1/10/2019								0.36
MW-507B	1/10/2019								0.14



## ATTACHMENT 1- BORING LOGS

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PROJECT:

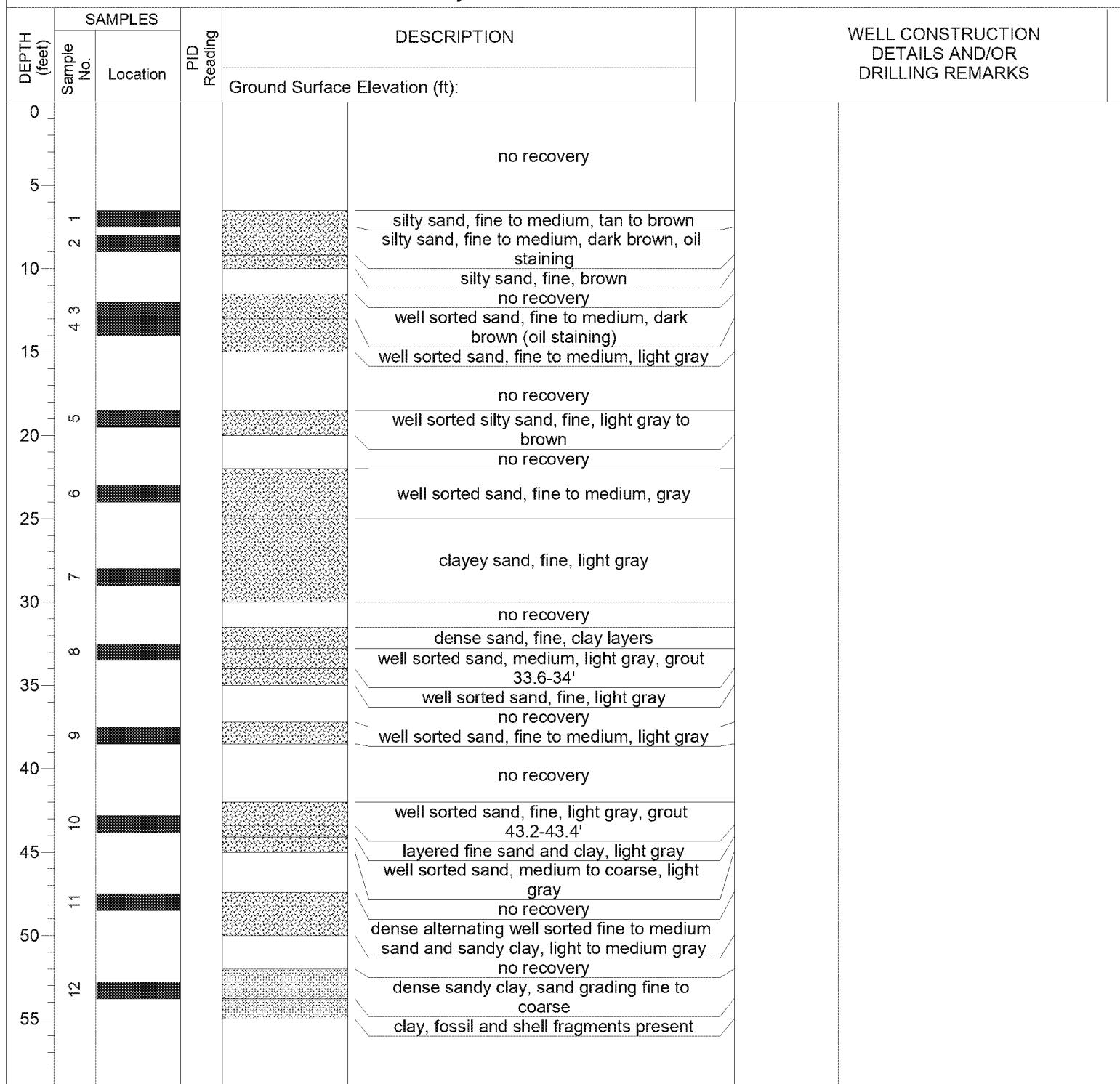
**LEP DUS: Soil Building Characterization**

On Drilling To Do

**NBS-NB**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE DRILLED:	12/1/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	55
DRILLING EQUIPMENT:	Geoprobe 7822DT	DEPTH TO SCREEN (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

**EPS**

ED\_006371\_00000945-00050

PROJECT:

**LSF 005: Soil Building Characterization**

On Drilling To Do

**CB-2-B-NB**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	12/1/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	53
DRILLING EQUIPMENT:	Geoprobe 7822DT	EMIT TA JETAW OT HTQAD DO BORING (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

DEPTH (feet)	SAMPLES		DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Location		
Ground Surface Elevation (ft.):				
0			no recovery	
5				
10	1		silty sand, fine, light brown	
11	2		silty sand, fine, dark brown, oily	
12	3		no recovery	
13	4		sand, fine, dark brown, stained	
14	5		sand, fine to medium, brown, stained	
15	6		sand, fine to medium, dark reddish brown, stained	
16	7		well sorted sand, fine to medium, brown to tan	
17	8		no recovery	
18	9		well sorted sand, medium, light gray	
19	10		no recovery	
20	11		well sorted sand, fine, light gray	
21	12		well sorted sand, coarse, light gray	
22	13		no recovery	
23	14		silty sand, abundant clay layers, gray	
24	15		no recovery	
25	16		silty sand, abundant clay layers, gray	
26	17		no recovery	
27	18		silty sand, abundant clay layers, gray	
28	19		no recovery	
29	20		silty sand, abundant clay layers, gray	
30	21		no recovery	
31	22		silty sand, abundant clay layers, gray	
32	23		no recovery	
33	24		silty sand, abundant clay layers, gray	
34	25		no recovery	
35	26		clayey sand, dark gray	
36	27		well sorted sand, medium, gray, clay stringers	
37	28		no recovery	
38	29		well sorted sand, medium, clay layers	
39	30		well sorted sand, medium	
40	31		no recovery	
41	32		alternating well sorted coarse sand and clay layers	
42	33		dense clay	
43	34		no recovery	
44	35		alternating layers of medium coarse sand and clay	
45	36		and clay	
46	37			
47	38			
48	39			
49	40			
50	41			
51	42			
52	43			
53	44			
54	45			
55	46			

**EPS**

ED\_006371\_00000945-00051

PROJECT:

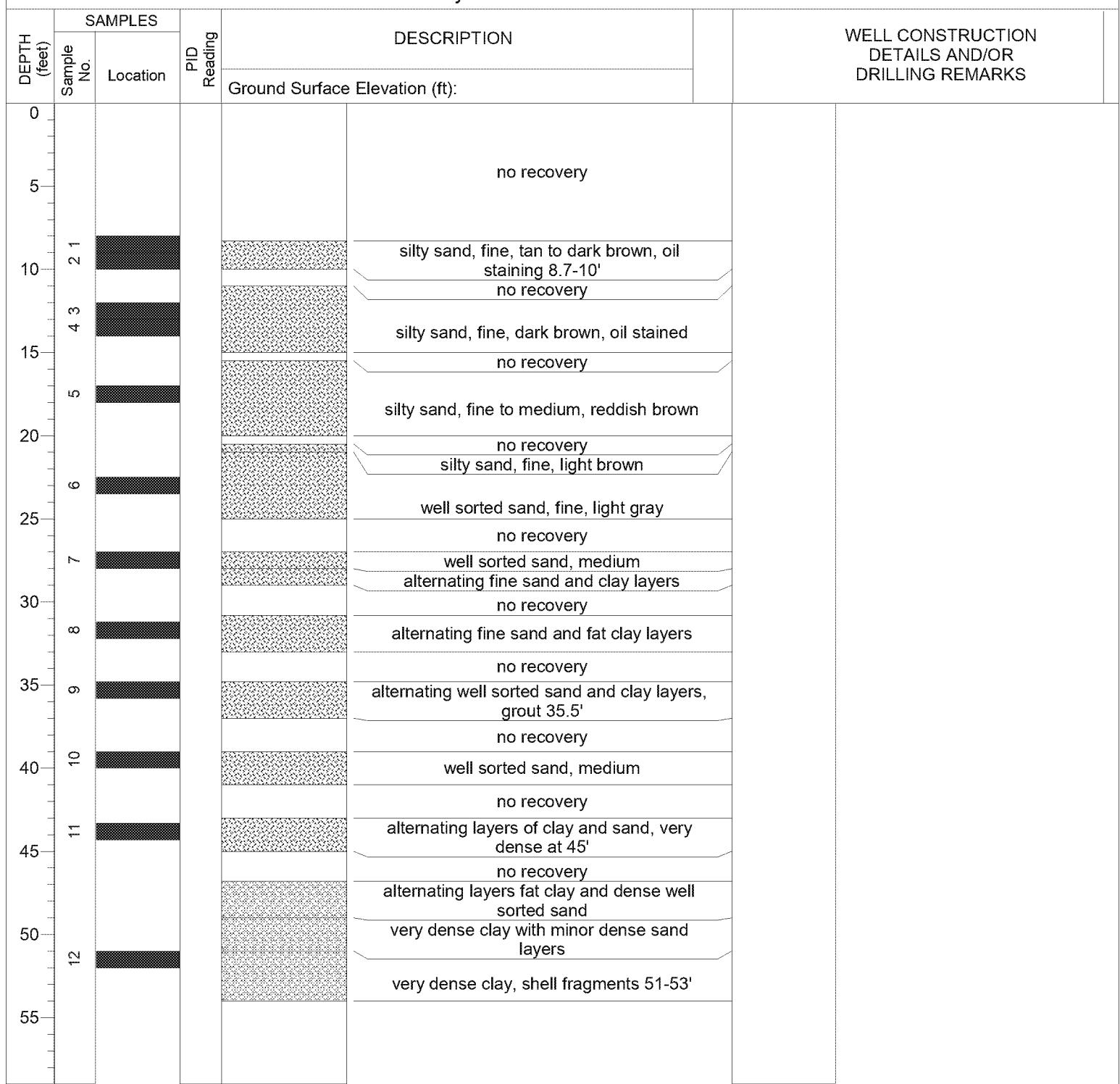
**LSF 005: Soil Building Characterization**

On Drilling To Do

**CB-NCB**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	12/1/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	54
DRILLING EQUIPMENT:	Geoprobe 7822DT	EMIT TA JETAW OT HTQAD DO BORING (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

**EPS**

ED\_006371\_00000945-00052

PROJECT:

**LCF 005: Well Building Characterization**

On Duration To Do

**CB-2B-NB**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	11/27/2018 11/28/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	53
DRILLING EQUIPMENT:	Geoprobe 7822DT	EMIT TA JETAW OT HTQAD DO BORING (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25 WELL DIAMETER (In.):

LOGGED BY: Kirk Kessler &amp; Joe Terry

DEPTH (feet)	SAMPLES		DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Location		
Ground Surface Elevation (ft.):				
0			no recovery	
5	1		well sorted sand, fine, tan	
10	2		well sorted sand, fine, black staining, heavy oil staining at 6'	
15	3		well sorted sand, fine, heavy oil staining from 12.5-14'	
20	4		well sorted sand, medium, tan	
25	5		well sorted sand, fine, gray	
30	6		sand, medium, gray	
35	7		well sorted sand, fine to medium, gray, clay stingers from 28.5-30'	
40	8			
45	9		well sorted sand, fine to medium, dark gray	
50	10		well sorted sand, medium to coarse grading to fine, light gray	
55	11		fat clay, gray	

**EPS**

ED\_006371\_00000945-00053

PROJECT:

**LSF 005: Soil Building Characterization**

On Drilling To Do

**NBS-CBS**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	11/30/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	55
DRILLING EQUIPMENT:	Geoprobe 7822DT	DEPTH TO SCREEN (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

DEPTH (feet)	SAMPLES		DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Location		
Ground Surface Elevation (ft.):				
0			no recovery	
			sand and rock/gravel fragments	
1			silty sand, fine, brown to dark brown	
			no recovery	
2			silty sand, fine, brown to dark brown, gravel chunks 8-9'	
			no recovery	
3			sand, medium, very heavy oil staining	
			sand, fine to medium, moderate staining	
4			sand, fine, brown	
			no recovery	
5			well sorted sand, fine, tan to brown	
			no recovery	
6			well sorted sand, medium, tan	
			well sorted sand, fine, dark brown coloration layers	
7			no recovery	
			silty sand, fine, tan	
8			well sorted sand, medium, gray	
			no recovery	
9			silty sand, medium, gray	
			silty sand, fine, light gray	
10			no recovery	
			clayey sand, fine, dark gray	
11			no recovery	
			well sorted sand, coarse, gray, thin clay layers	
12			well sorted sand, coarse, gray	
			no recovery	
13			dense sand, medium, gray, clay stringers	
			very dense sandy clay, tan to gray	
14			no recovery	
15			dense clay with thin sand layers, fossil shells at 53.5'	
55				

**EPS**

ED\_006371\_00000945-00054

PROJECT:

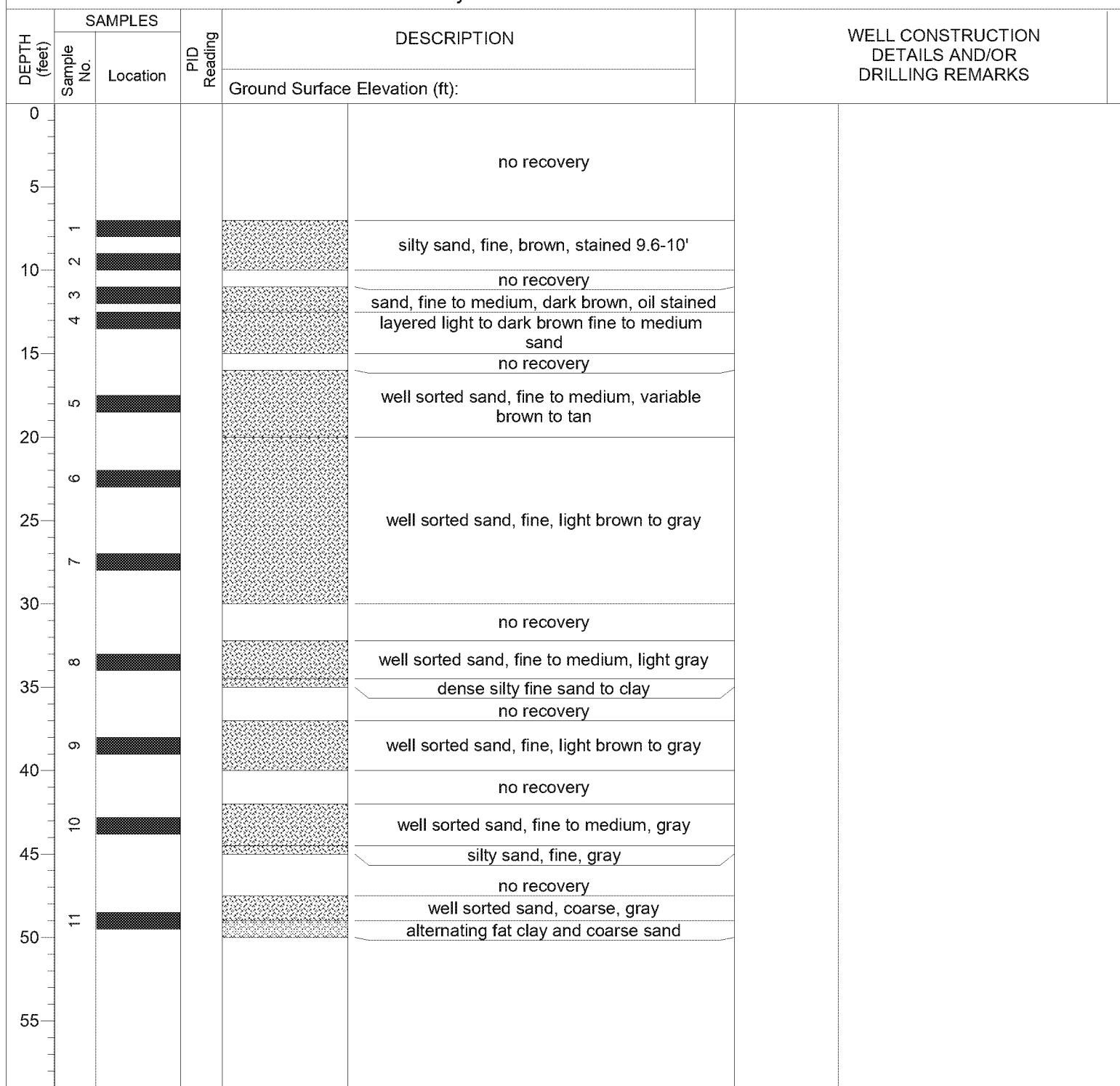
**LSF 005: Well Building Characterization**

On Drilling To Do

**CBS-CBS**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	11/30/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	50
DRILLING EQUIPMENT:	Geoprobe 7822DT	DEPTH TO SCREEN (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

**EPS**

ED\_006371\_00000945-00055

PROJECT:

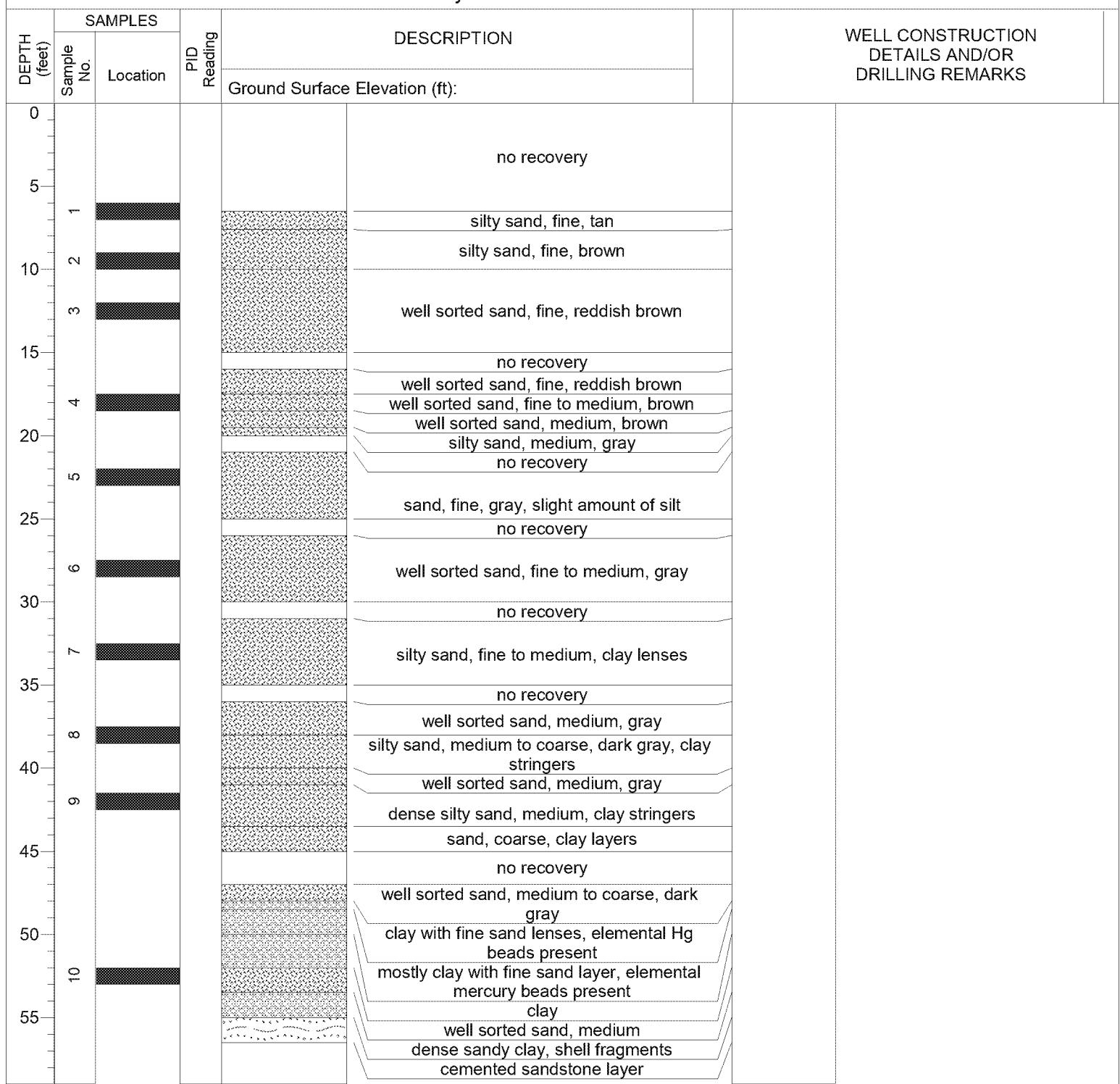
**LSF 005: Soil Building Characterization**

On Drilling To Do

**CBS-SB-3**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	11/29/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	55
DRILLING EQUIPMENT:	Geoprobe 7822DT	EMIT TA JETAW OT HTRAB DO BORING (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

**EPS**

ED\_006371\_00000945-00056

PROJECT:

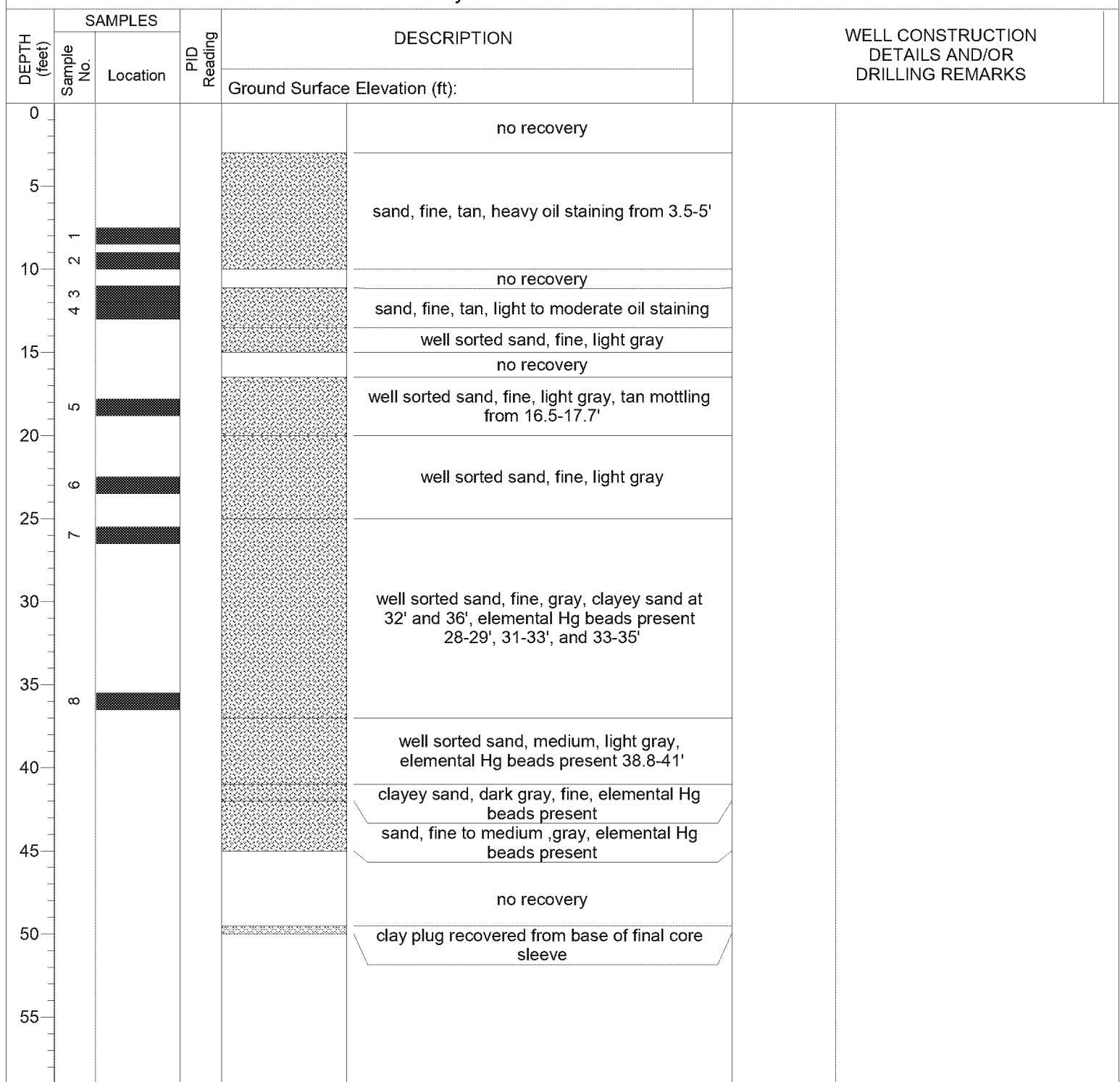
**LSF 005: Soil Building Characterization**

On Drilling To Do

**CBS-CBS**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	11/28/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	50
DRILLING EQUIPMENT:	Geoprobe 7822DT	EMIT TA JETAW OT HTQAD DO BORING (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

**EPS**

ED\_006371\_00000945-00057

PROJECT:

**LSF 005: Soil Building Characterization**

On Drilling To Do

**CBS-CBS**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE DRILLED AT:	11/28/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	50
DRILLING EQUIPMENT:	Geoprobe 7822DT	DEPTH TO BOTTOM (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

DEPTH (feet)	SAMPLES		DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Location		
Ground Surface Elevation (ft.):				
0			no recovery	
5	1		sand, fine, brown, mottled oil staining from 7.2-8.2'	
10	2		sand, fine, brown, saturated with oil	
15	3		no recovery	
20	4		sand, fine, dark brown, saturated with oil	
25	5		sand, brown, fine	
30	6		well sorted sand, medium to coarse, dark brown, soil stained	
35	7		sand, fine, brown	
40	8		sand, fine, light brown	
45	9		well sorted sand, fine, gray	
50	10		well sorted sand, medium to coarse, dark gray	
55	11		well sorted sand, medium to coarse, gray	
	12		no recovery	
			well sorted sand, fine, dark brown	
			well sorted sand, fine, gray	
			well sorted sand, fine, gray, periodic black mottling	
			well sorted sand, coarse, gray	
			clayey sand, fine, dark gray	
			layered fat clay with fine to medium sand stringers	
			dense clayey sand to sandy clay with fossil fragments	

**EPS**

ED\_006371\_00000945-00058

PROJECT:

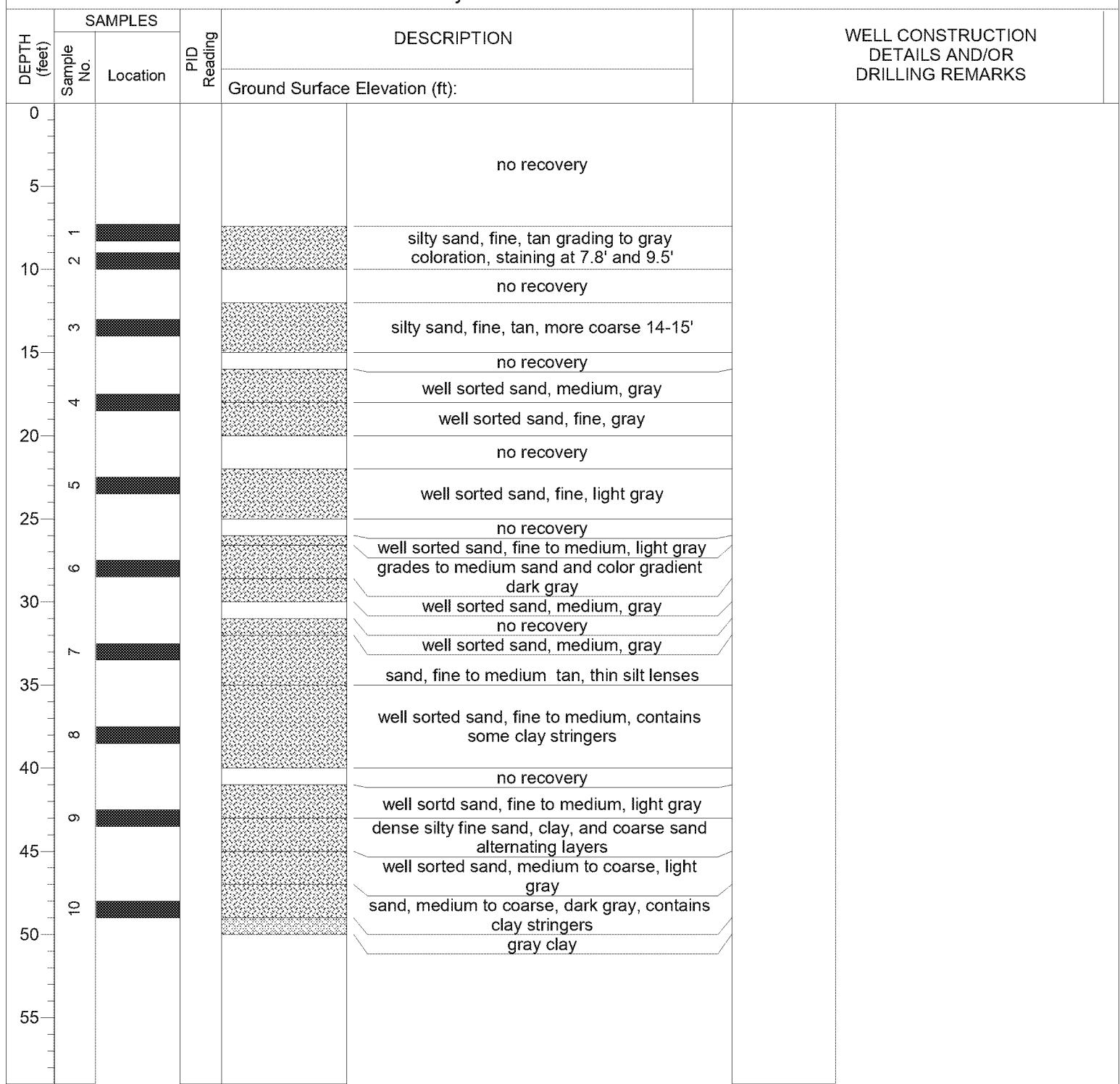
**LSF 005: Soil Building Characterization**

On Drilling To Do

**CBS-CBS**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	11/29/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	50
DRILLING EQUIPMENT:	Geoprobe 7822DT	EMIT TA JETAW OT HTQAD DO BORING (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

**EPS**

ED\_006371\_00000945-00059

PROJECT:

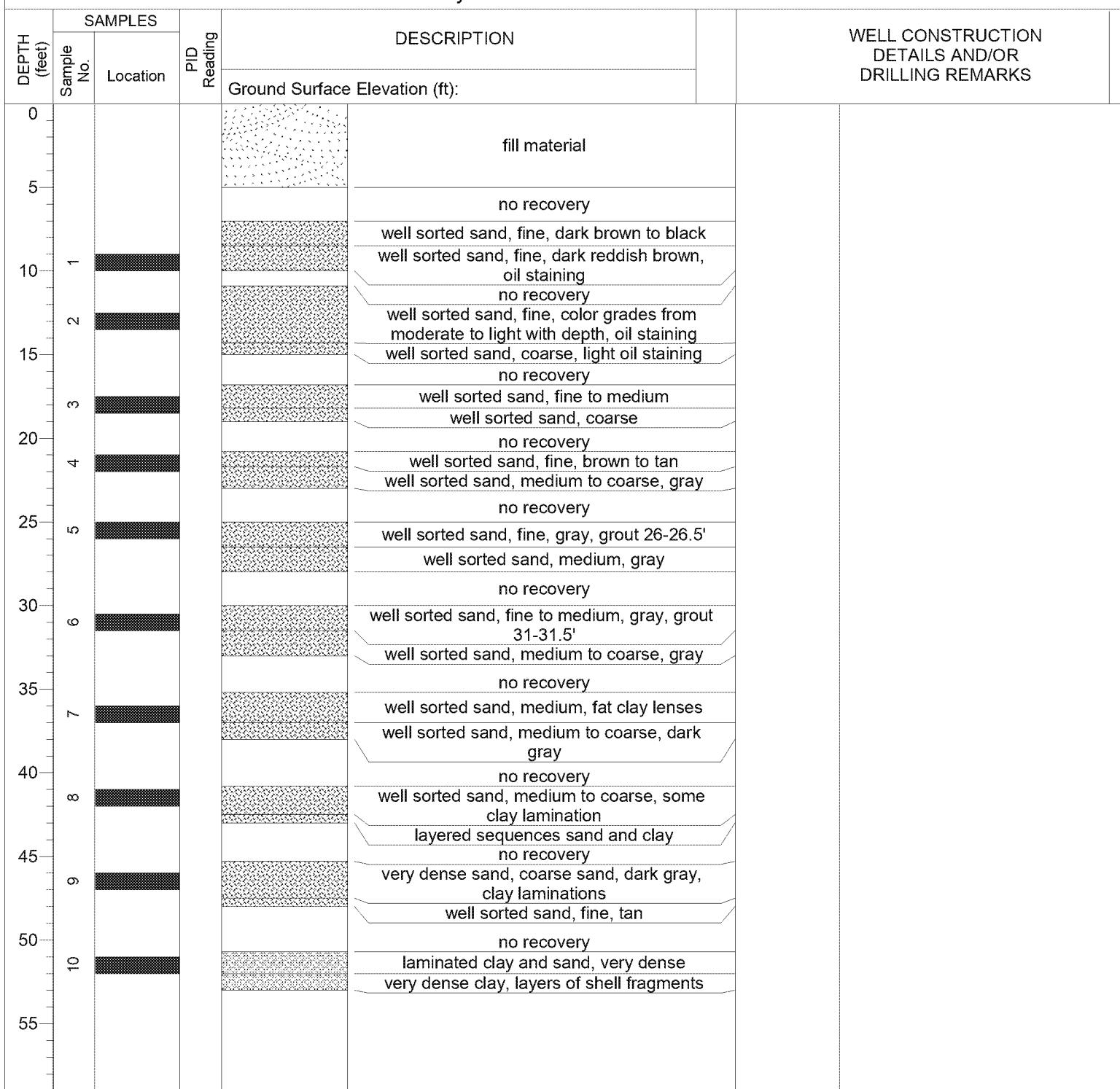
**LSF 005: Soil Building Characterization**

On Drilling To Do

**CBS-SBS**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	12/2/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	53
DRILLING EQUIPMENT:	Geoprobe 7822DT	EMIT TA JETAW OT HTQAD DO BORING (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

**EPS**

ED\_006371\_00000945-00060

PROJECT:

**LSF 005: Soil Building Characterization**

On Drilling To Do

**CBS-CBS**

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	12/3/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	55
DRILLING EQUIPMENT:	Geoprobe 7822DT	EMIT TA JETAW OT HTEQD DO BORING (ft.):	CASING (ft.):
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	WELL DIAMETER (In.): 2.25

LOGGED BY: Kirk Kessler &amp; Joe Terry

DEPTH (feet)	SAMPLES		DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	PID Reading		
			Ground Surface Elevation (ft.):	
0			no recovery	
			fill material and gravel layers at base	
5			silty sand, fine, dark brown	
			no recovery	
10	1		silty sand, fine, brown to dark brown	
			no recovery	
15	2		silty sand, fine, very dark brown ,oil staining	
			silty sand, fine, reddish brown	
20	3		silty sand, fine, reddish brown	
			well sorted sand, tan to light gray, coarses fine to medium downward	
25	4		well sorted sand, fine, light gray	
			well sorted sand, medium, gray	
30	5		no recovery	
			well sorted sand, fine to medium	
35	6		well sorted sand, medium, clay laminations	
			no recovery	
40	7		well sorted sand, medium, frequent clay laminations	
			no recovery	
45	8		alternating layers well sorted medium sand and clay	
			well sorted sand, medium to coarse, dark gray	
50	9		no recovery	
			layered well sorted medium to coarse sand and clay, gray	
55	10		well sorted sand, fine to medium, tan to light gray	
			layered well sorted coarse sand and clay	
			no recovery	
			dense alternating layers fine to coarse sand and clay	
			no recovery	
			dense alternating layers fine to coarse sand and clay	
			very dense sandy clay, shell and white-type deposits at base	

**EPS**

ED\_006371\_00000945-00061

PROJECT:

**LSF 005: Soil Building Characterization**

On Drilling To Do

J-B-S-9

SITE LOCATION:	Brunswick, GA	TOP OF CASING ELEVATION (ft.):	
DRILLING CONTRACTOR:	Cascade Drilling	DATE FINISHED:	11/30/2018
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.):	55
DRILLING EQUIPMENT:	Geoprobe 7822DT	EMIT TA JETAW OT HTQAD DO BORING (ft.):	
SAMPLING METHOD:	Dual-Tube or Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.):	2.25
		WELL DIAMETER (In.):	

LOGGED BY: Kirk Kessler &amp; Joe Terry

DEPTH (feet)	SAMPLES		DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Location		
Ground Surface Elevation (ft.):				
0			no recovery	
5			silty sand, fine, light brown	
10	2 1		silty sand, fine, dark brown	
			no recovery	
15	4 3		silty sand, fine, dark brown, oily	
			silty sand, fine, brown	
20	5		no recovery	
			well sorted sand, fine, reddish to dark brown	
25	6		well sorted sand, fine, tan	
			layered dark and lighter brown sand, fine	
30	7		no recovery	
			silty sand, fine, tan to brown	
35	8		no recovery	
			sand, fine, tan	
40	9		well sorted sand, medium, tan to brown	
			well sorted sand, medium, dark brown to black	
45	10		well sorted sand, fine, brown	
			no recovery	
50	11		sand, medium, gray, clay 33-33.2'	
			silty sand, fine to medium, brown	
55	12		dense sandy clay	
			no recovery	
			dense well sorted sand, fine, clay lense	
			variable sorted fine sand and clay, dense	
			well sorted sand, medium to coarse, black	
			no recovery	
			sand, medium, light gray, dark gray clay stringers	
			clayey sand, medium, gray	
			well sorted sand, medium to coarse, tan to gray	
			no recovery	
			fat clay, gray	
			well sorted sand, coarse, dark gray	
			very dense clayey sand	
			no recovery	
			fat clay, gray, well sorted sand seams	

EPS

ED\_006371\_00000945-00062



## **ATTACHMENT 2- WATERLOO DATA PACKAGE**

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# Final Data Package for Waterloo Profiling Services

SITE LOCATION: LCP SUPERFUND

BRUNSWICK, GA

Project ID: 250181004

Report Date: January 9th, 2019



This project was performed by Cascade Technical Services for Environmental Planning Specialists, Inc.

**Prepared for:**

EPS  
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**Prepared by:**

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## Table of Contents

1. WATERLOO <sup>APS</sup> NARRATIVE.....	2
2. SOP DEVIATION TABLE.....	3
3. PLOTS OF ( $I_K$ ) AND PHYSIOCHEMICAL DATA.....	4
4. PHYSIOCHEMICAL DAILY LOGS.....	5

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## 1. WATERLOO<sup>APS</sup> NARRATIVE



## Narrative

Cascade Technical Services (Cascade) is pleased to present this data report to Environmental Planning Specialists, Inc. (EPS) for the Waterloo<sup>APS™</sup> (APS-EC) services that were provided between the dates of November 28<sup>th</sup>, 2018 and December 7<sup>th</sup>, 2018 in Brunswick, GA.

The results associated with the data and plots presented in this report were generated in accordance to Cascade's Standard Operating Procedures (SOPs) for the APS services.

All APS field work which includes the collection of Index of Hydraulic Conductivity ( $I_k$ ) data, electrical conductance, sample collection, APS equipment calibration, multiparameter sonde calibration and equipment decontamination were completed by trained, scientific professionals and all QA/QC measurements associated with these data were found to be within the tolerances set forth in the SOPs. Exceptions/deviations regarding these data are noted below.

- Location CB1-CBP-2 –  $I_k$  data from a depth of 20.1 to 22.0 ft bgs was not collected due to an equipment issue.
- Location SP-CBP-3 – EC data from a depth of 0 to 17.0 ft bgs was not collected due to an equipment issue.
- Location SP-CBP-4 –  $I_k$  data from a depth of 34.7 to 37.1 ft bgs was not collected due to an equipment issue.
- Not all samples collected throughout this investigation reached physicochemical parameter stabilization as outlined in the Cascade SOP. Some samples were collected prior to physicochemical parameter stabilization due to time constraints and/ or sample volume constraints (if the pumping rate slowed due to silting of the downhole sampling tip).

- 
- Exceptions/deviations regarding these data are noted in the table "Deviations from Standard Operating Procedure".

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package has been authorized by the data manager or his designee, as verified by the following signature.

Signature:



Casey Moore, Project Manager, Cascade Technical Services

## 2. SOP DEVIATION TABLE

Deviations From Standard Operating Procedures								
APS Location	Sample Depth	Parameters that did not reach full stabilization					Comment	
		No Head Measurement	Spec Cond	Diss Oxygen	pH	ORP	All Parameters	
CB1-CBP-2	-48.0			X				Sample collected prior to full parameter stabilization.
CB1-SB-1	-20.8			X				Sample collected prior to full parameter stabilization.
	-40.3			X				Sample collected prior to full parameter stabilization.
CB1-SB-2	-35.0			X		X		Sample collected prior to full parameter stabilization.
CB1-SB-4	-20.3			X				Sample collected prior to full parameter stabilization.
	-35.2			X				Sample collected prior to full parameter stabilization.
	-46.9			X				Sample collected prior to full parameter stabilization.
CB1-SB-5	-35.8				X			Sample collected prior to full parameter stabilization.
	-48.0			X	X			Sample collected prior to full parameter stabilization.
CB2-SB-1	-35.3			X				Sample collected prior to full parameter stabilization.
CB2-SB-2	-22.1			X				Sample collected prior to full parameter stabilization.
	-32.8			X				Sample collected prior to full parameter stabilization.
CB2-SB-3	-18.2			X				Sample collected prior to full parameter stabilization.
	-49.0			X				Sample collected prior to full parameter stabilization.
CB2-SB-4	-20.2			X				Sample collected prior to full parameter stabilization.
	-35.3			X				Sample collected prior to full parameter stabilization.
	-49.1			X				Sample collected prior to full parameter stabilization.
CB2-SB-5	-34.9	X		X				No head measurement collected. Sample collected prior to full stabilization.
	-45.0	X						No head measurement collected.
CB2-SB-6	-35.4			X				Sample collected prior to full parameter stabilization.
	-48.8			X				Sample collected prior to full parameter stabilization.
SP-CBP-3	-35.0			X				Sample collected prior to full parameter stabilization.
	-49.7			X				Sample collected prior to full parameter stabilization.

APS Location	Sample Depth	Parameters that did not reach full stabilization						Comment
		No Head Measurement	Spec Cond	Diss Oxygen	pH	ORP	All Parameters	
SP-CBP-4	-20.3			X				Sample collected prior to full parameter stabilization.
	-46.1			X				Sample collected prior to full parameter stabilization.
SP-CBP-5	-20.5			X				Sample collected prior to full parameter stabilization.
	-45.0			X				Sample collected prior to full parameter stabilization.
SP-SB-1	-35.5			X				Sample collected prior to full parameter stabilization.

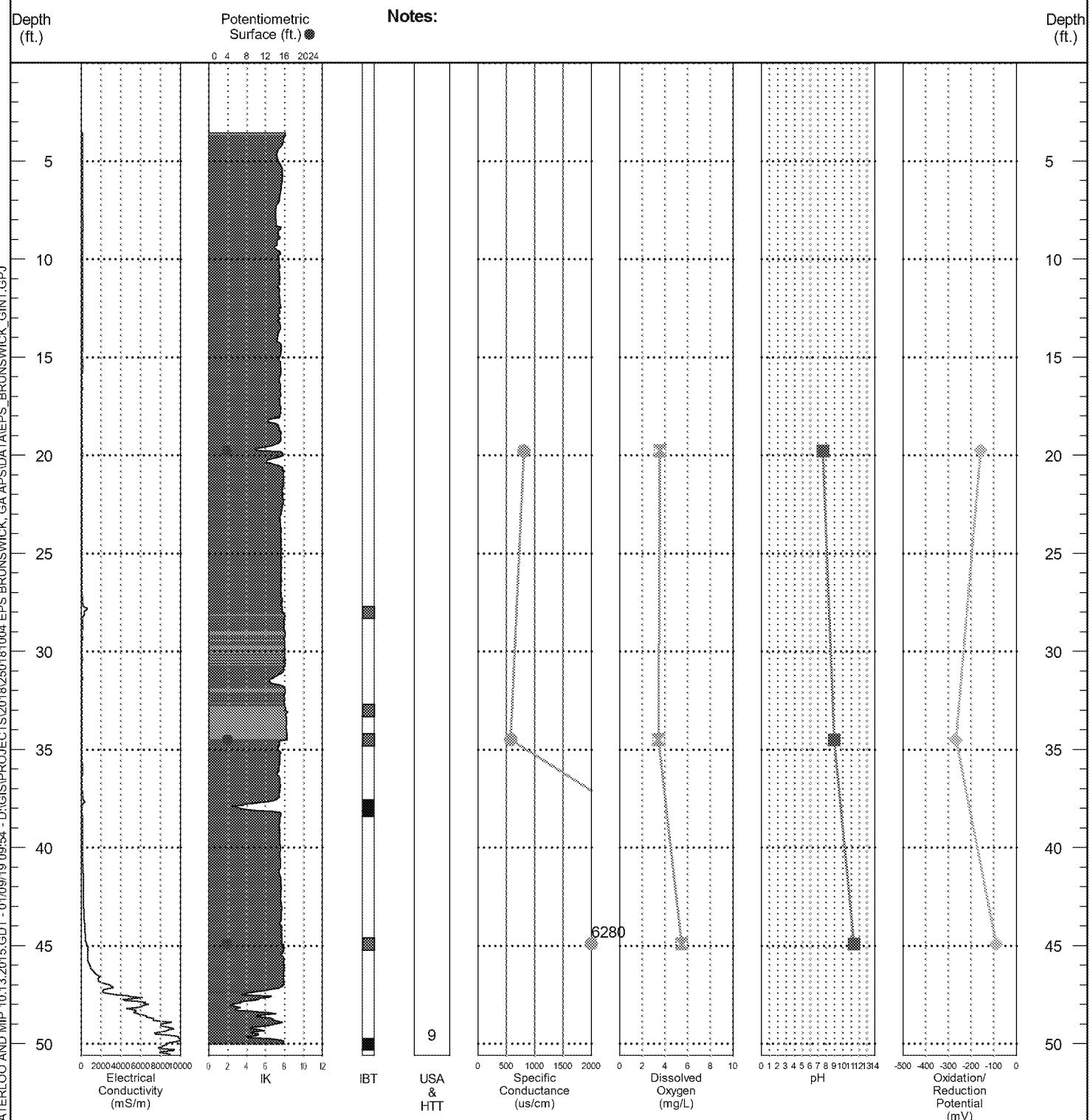
### 3. PLOTS OF PHYSIOCHEMICAL AND ( $I_k$ ) DATA

# BORING NAME: CB1-CBP-1

Total Depth 50.1 ft.

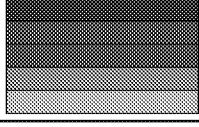


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 11/29/2018  
 Sampler(s) AMK  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

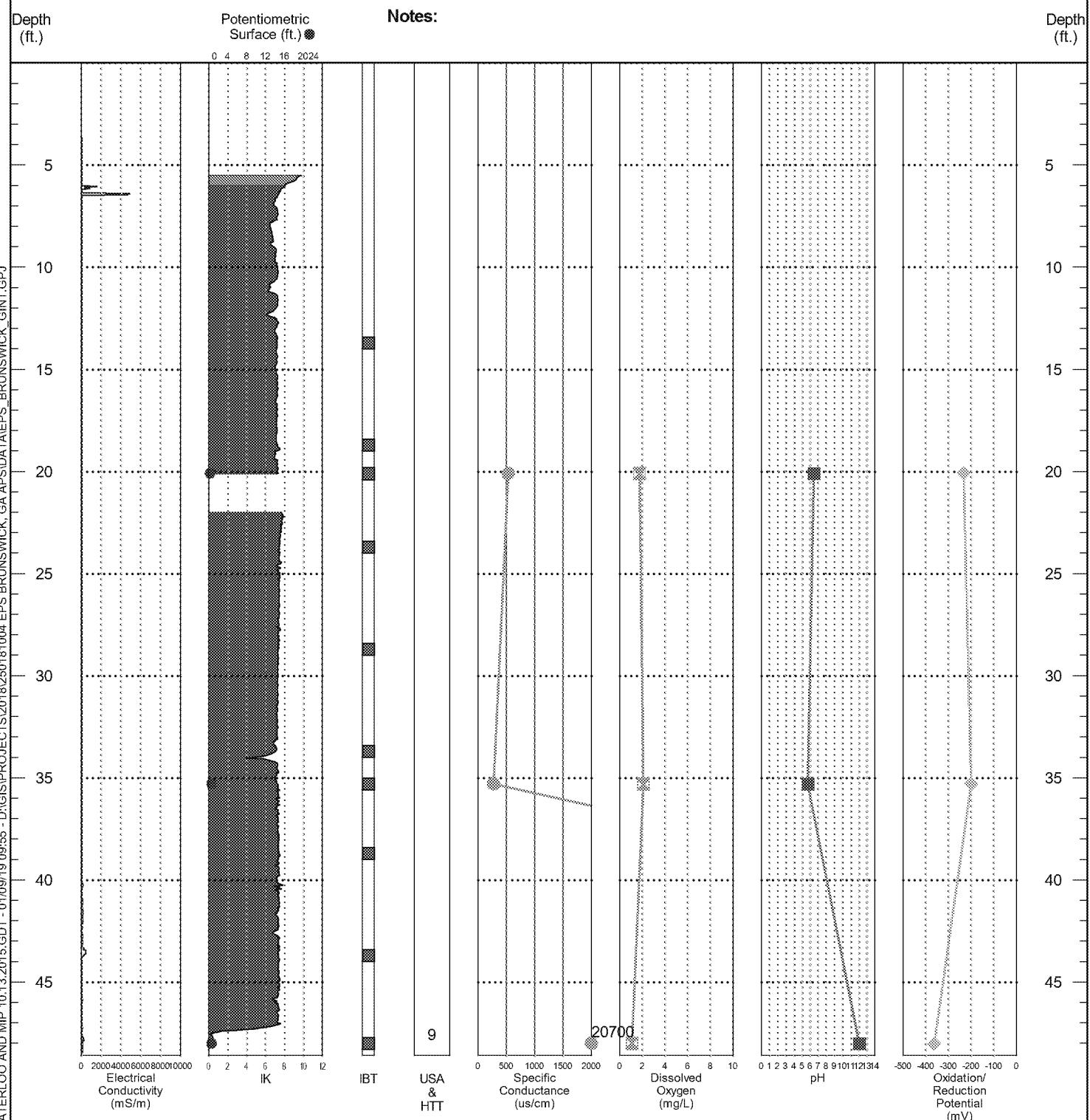
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB1-CBP-2

Total Depth 48.6 ft.

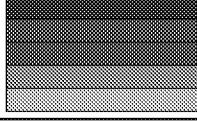


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/6/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

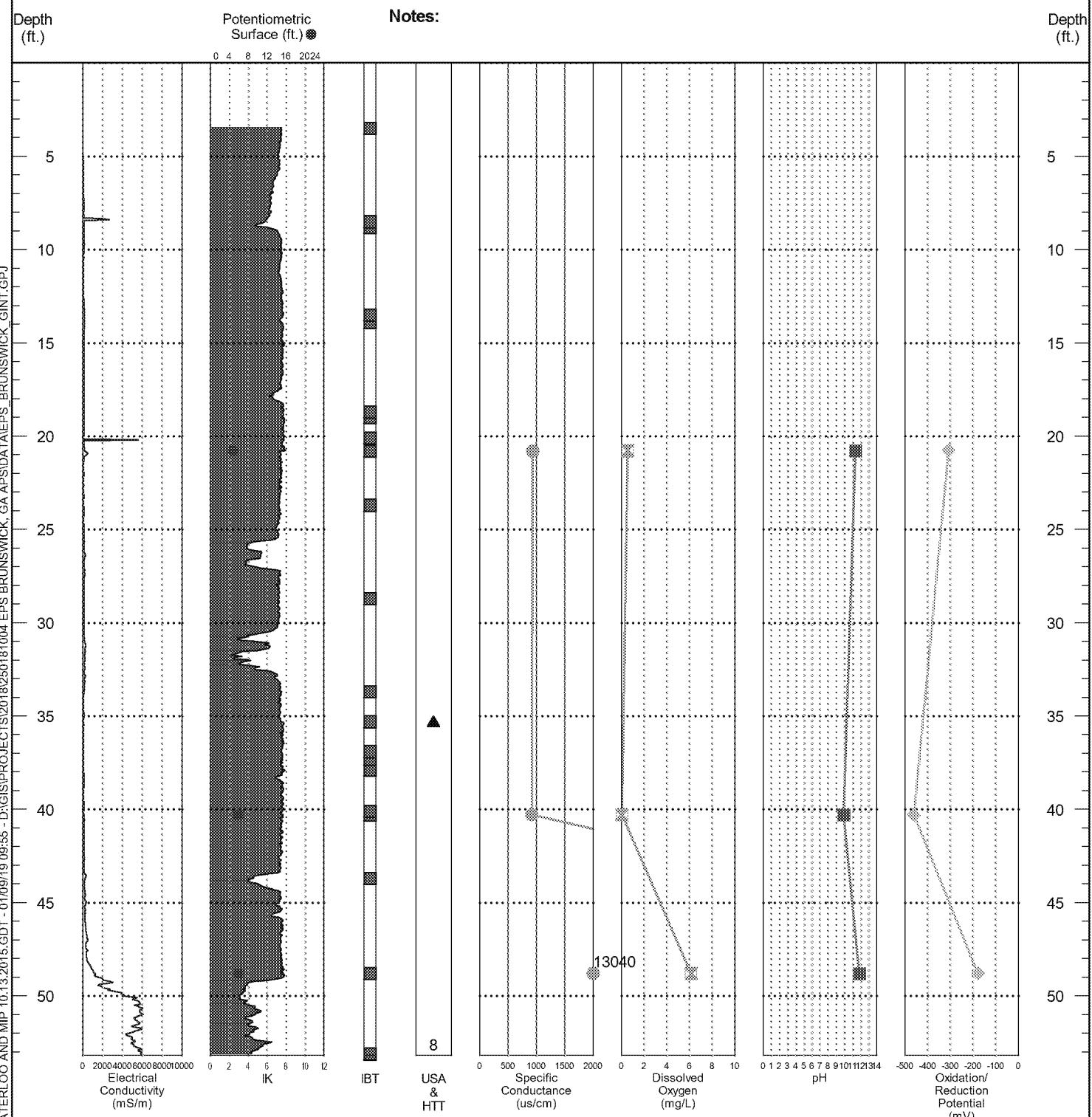
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB1-SB-1

Total Depth 53.1 ft.

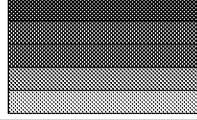


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/19/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
0.1 to 2  
2 to 4  
4 to 6  
>6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

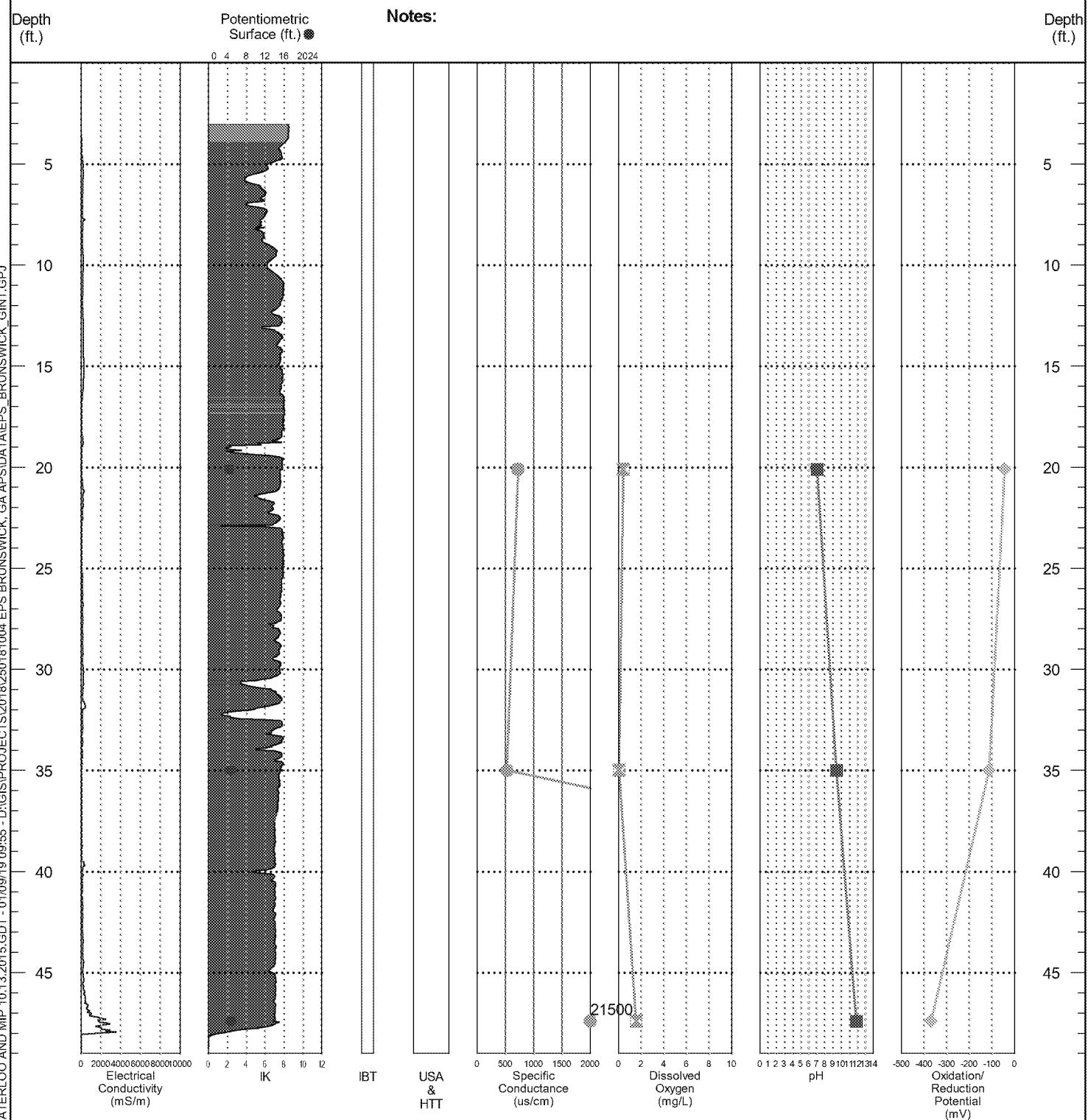
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB1-SB-2

Total Depth 48.6 ft.

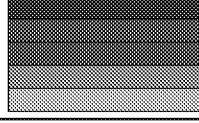


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 11/30/2018  
 Sampler(s) AMK  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

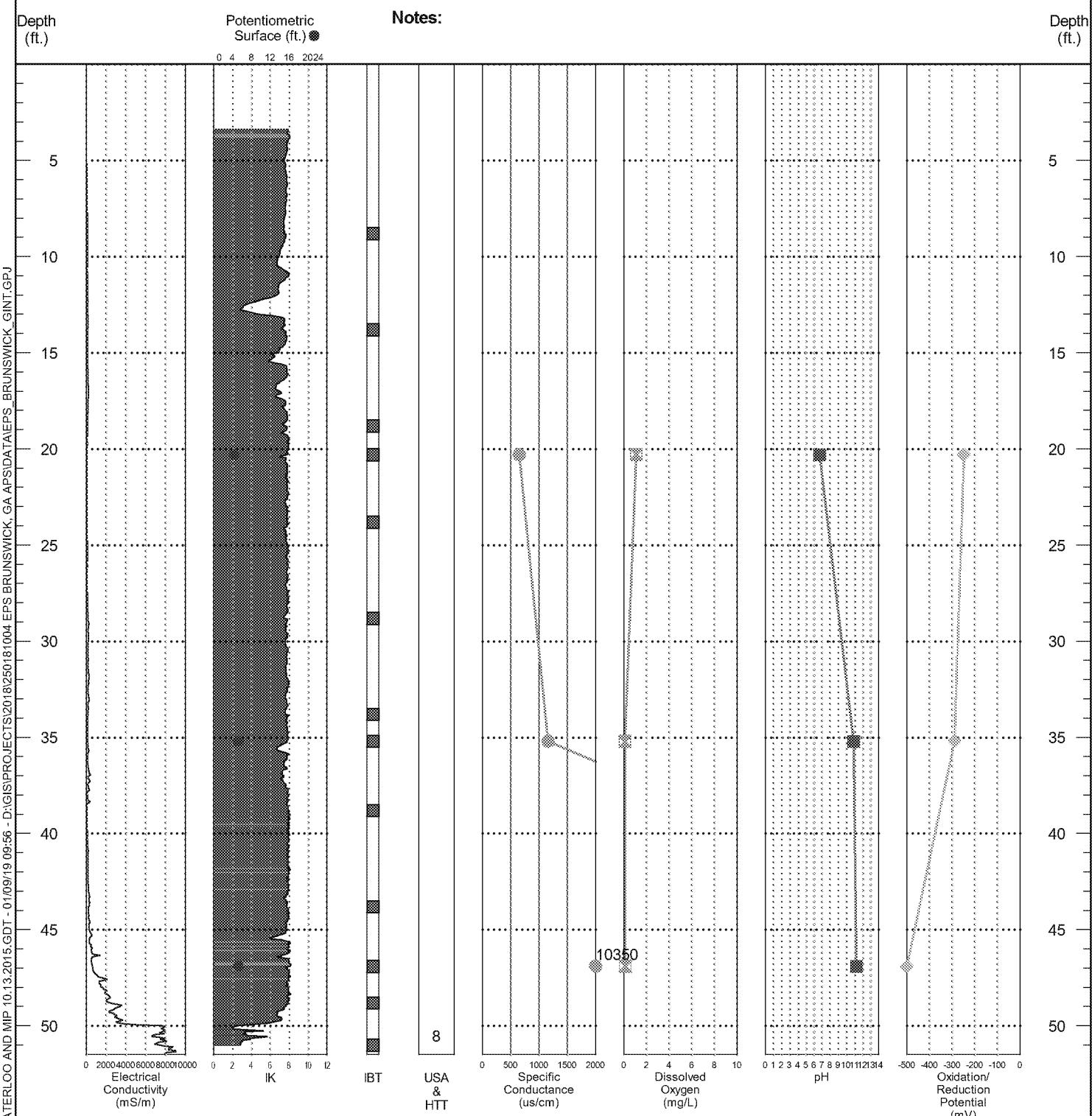
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB1-SB-4

Total Depth 51 ft.

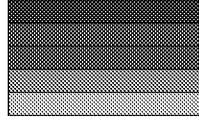


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/1/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

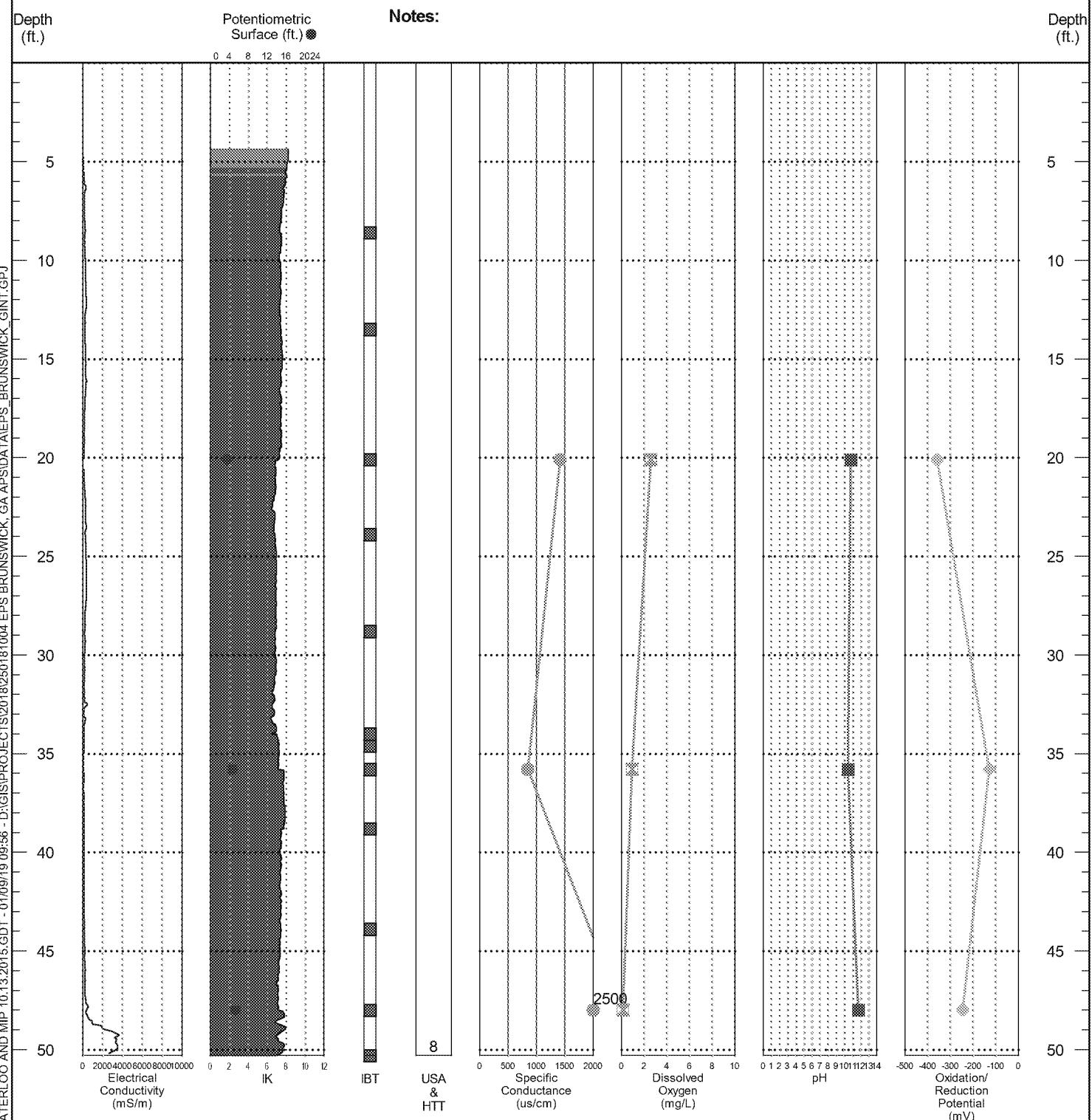
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB1-SB-5

Total Depth 50.3 ft.



Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 11/29/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

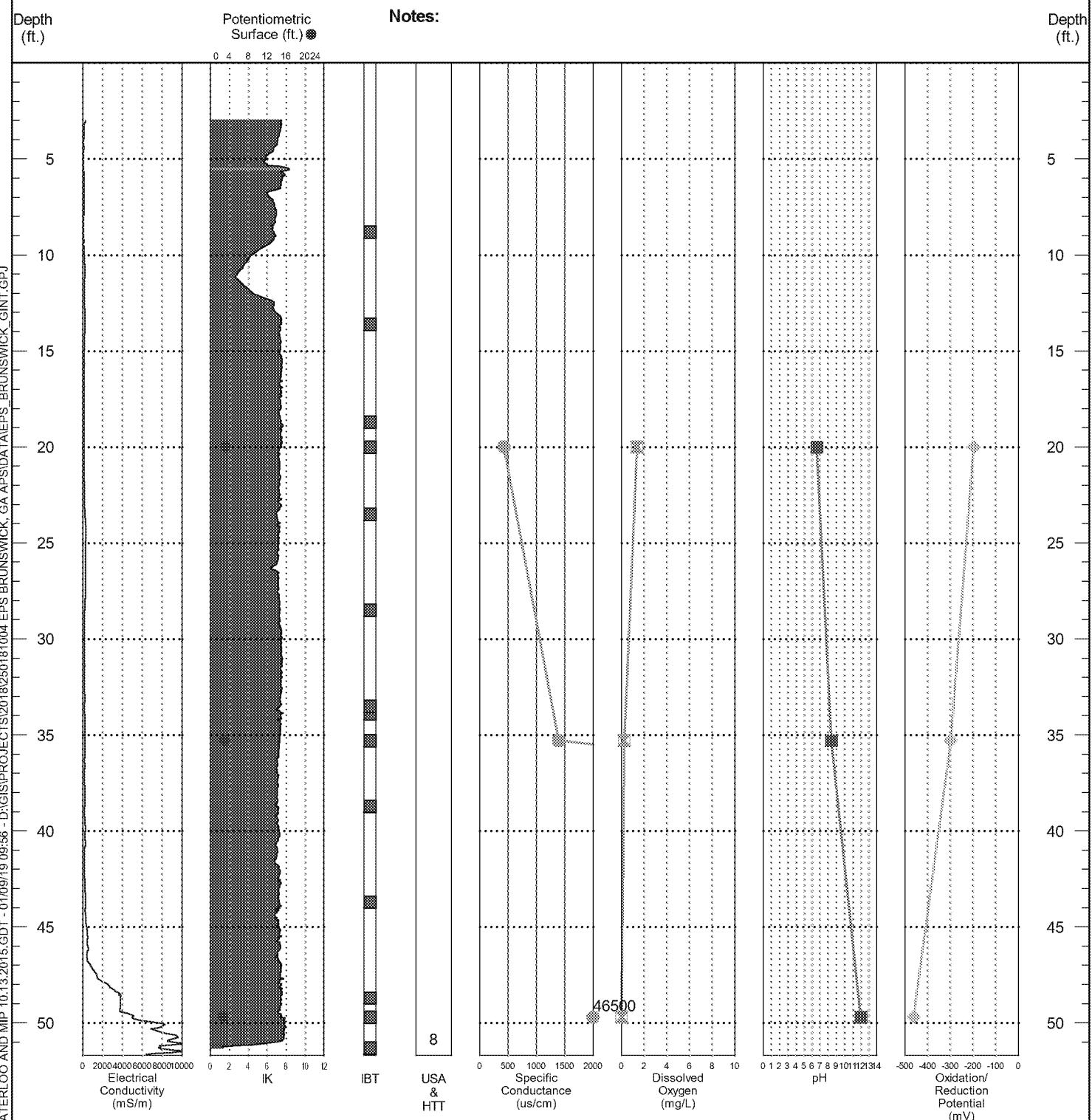
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB2-SB-1

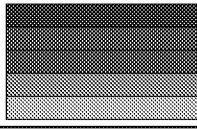
Total Depth 51.3 ft.



Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/20/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



### IK Scale



0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6

IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

### Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

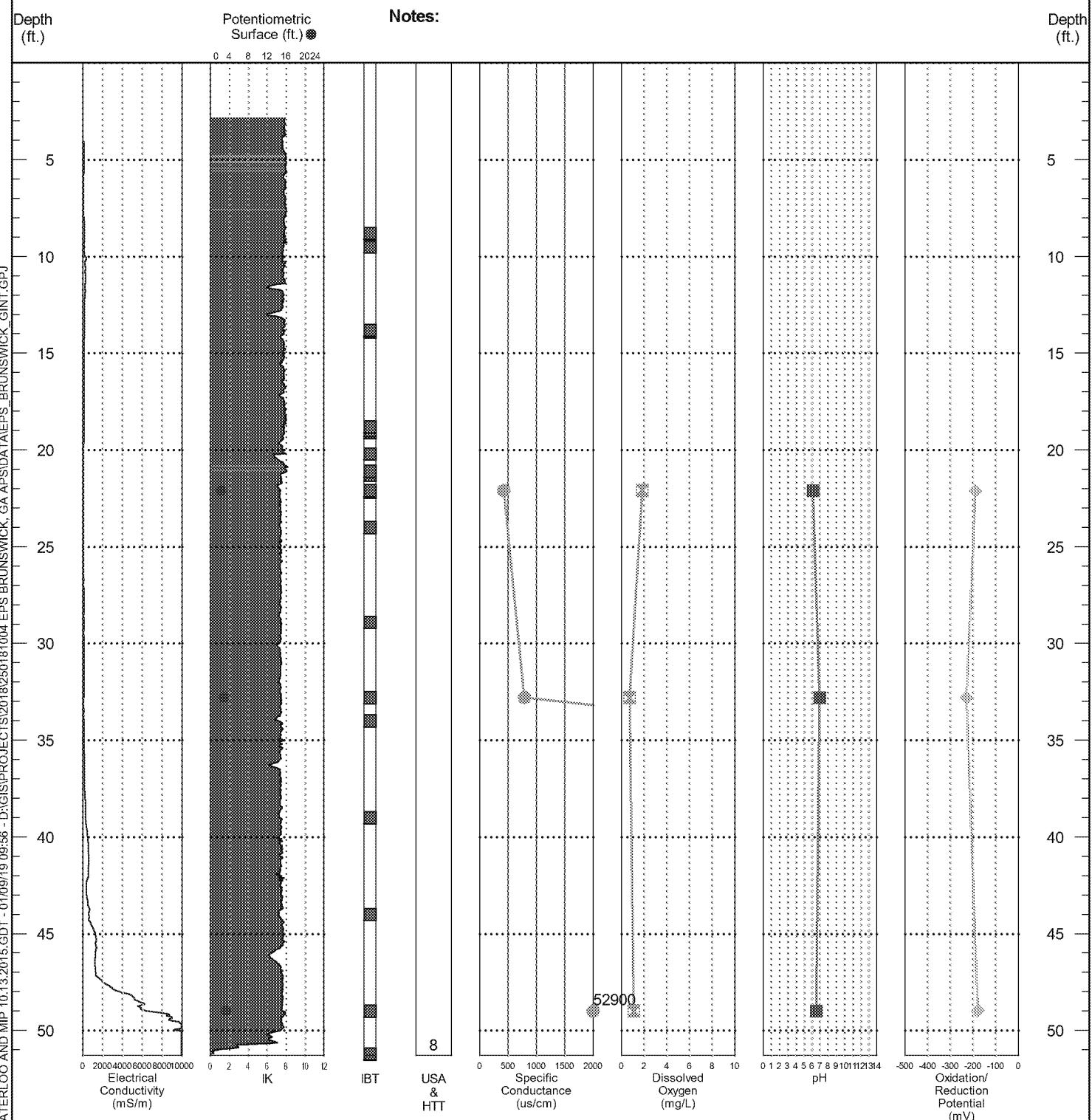
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB2-SB-2

Total Depth 51.2 ft.

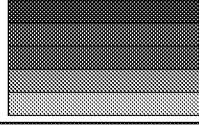


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/20/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

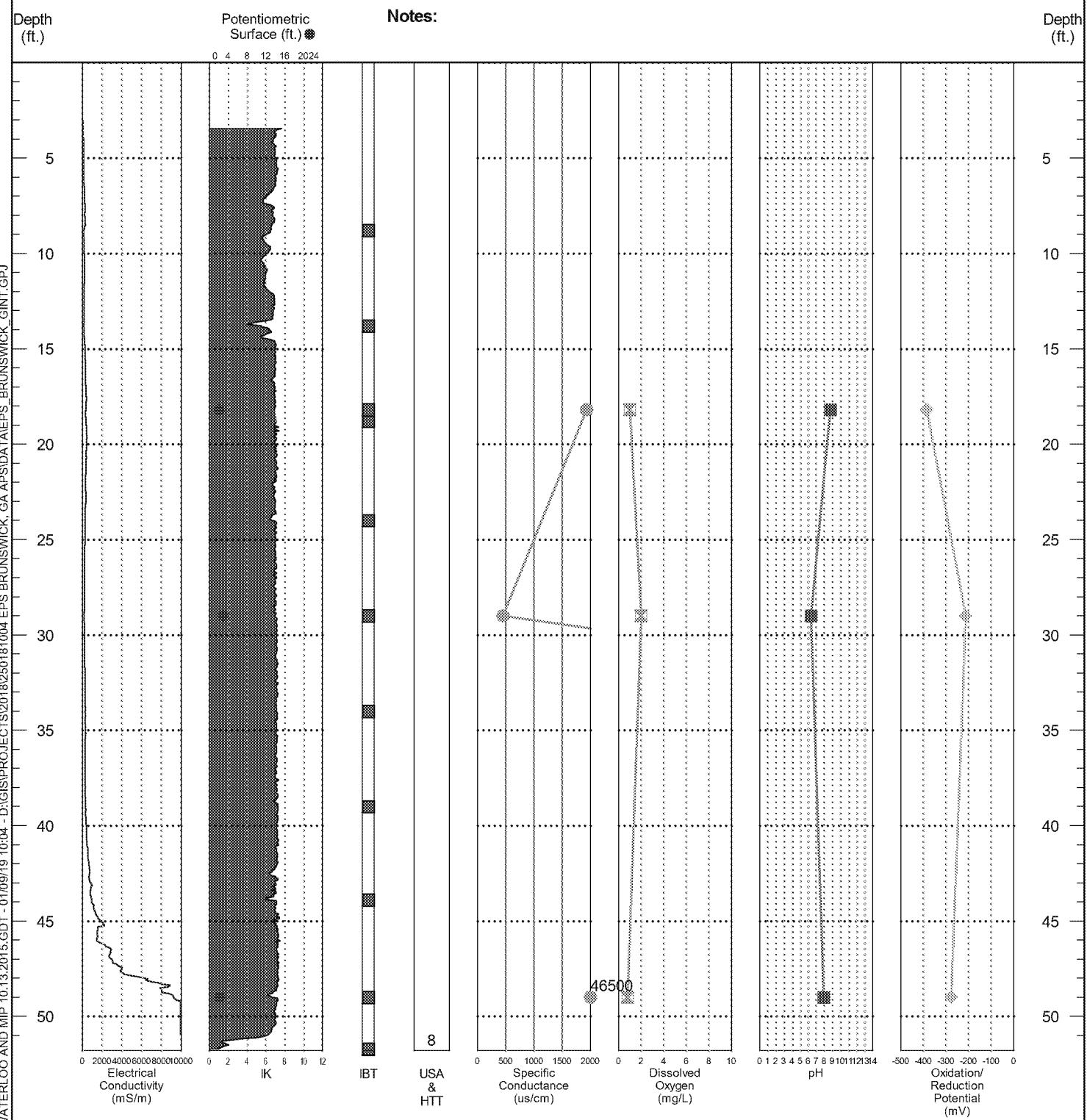
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB2-SB-3

Total Depth 51.7 ft.

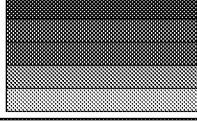


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/20/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- ▨ = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

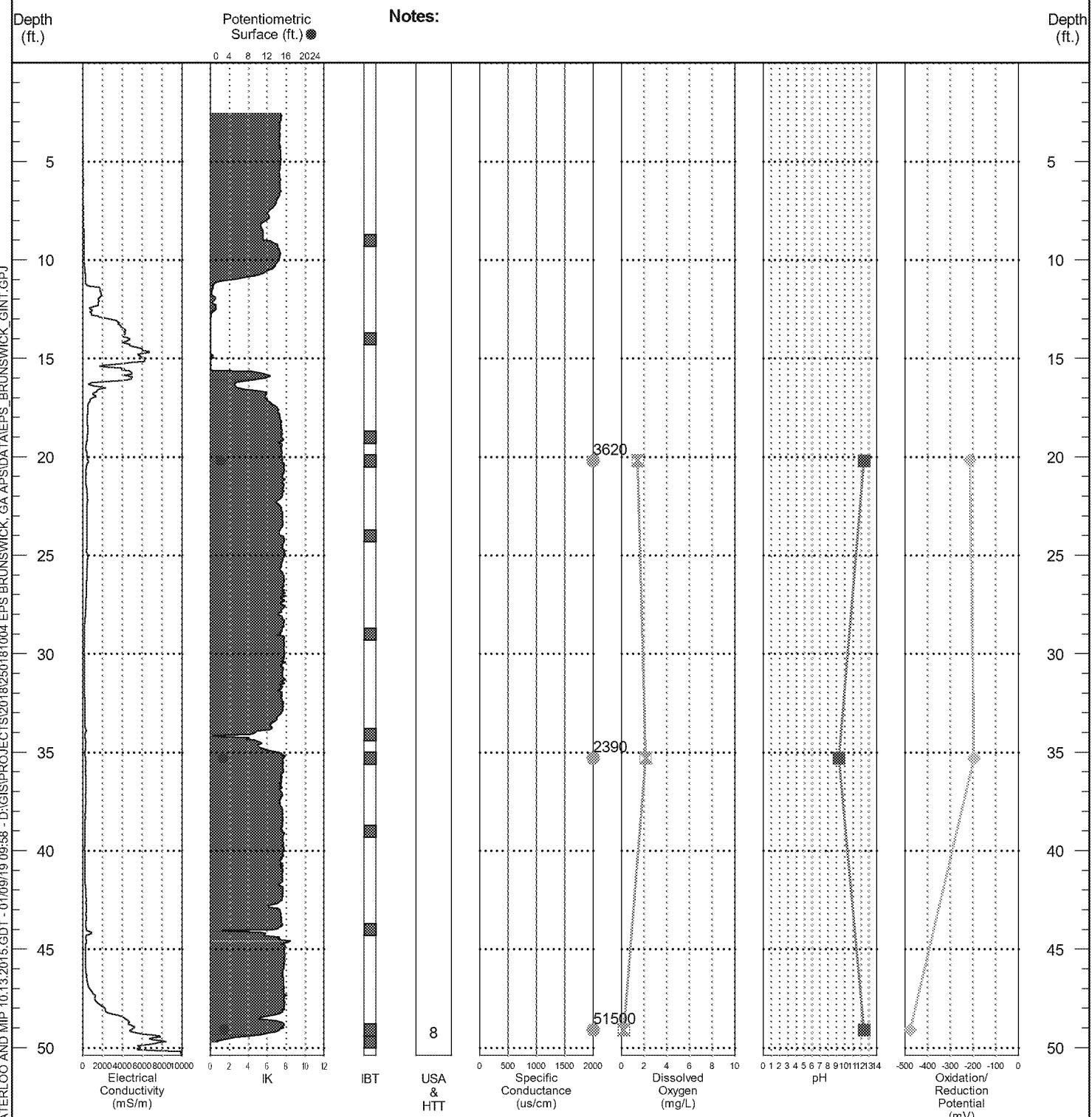
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB2-SB-4

Total Depth 49.7 ft.

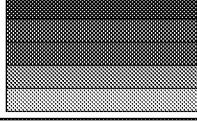


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/5/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

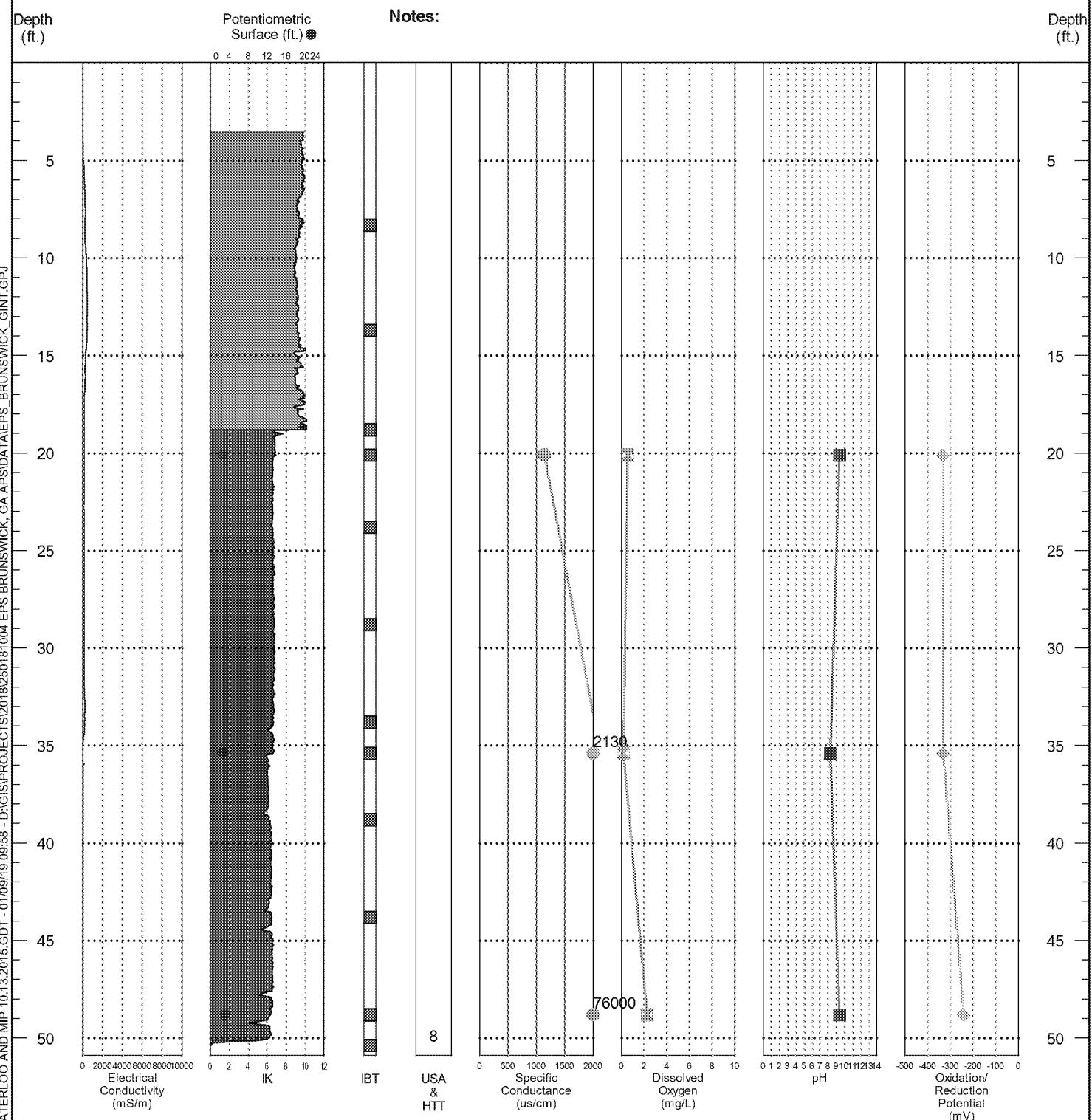
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB2-SB-6

Total Depth 50.4 ft.

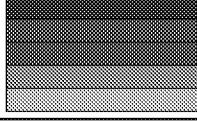


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/4/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

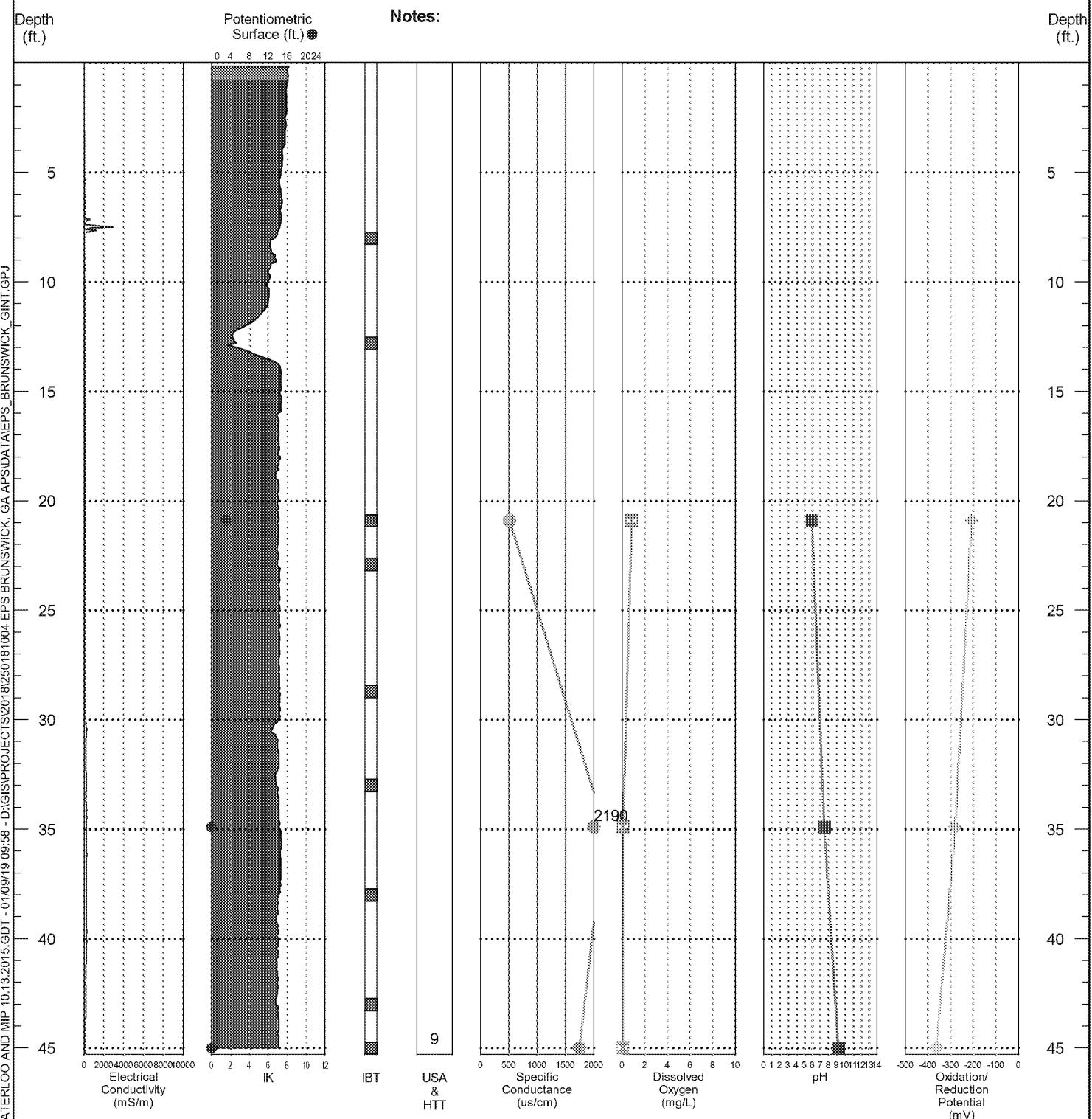
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: CB2-SP-5

Total Depth 45 ft.

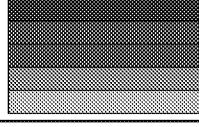


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/3/2018  
 Sampler(s) AMK  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

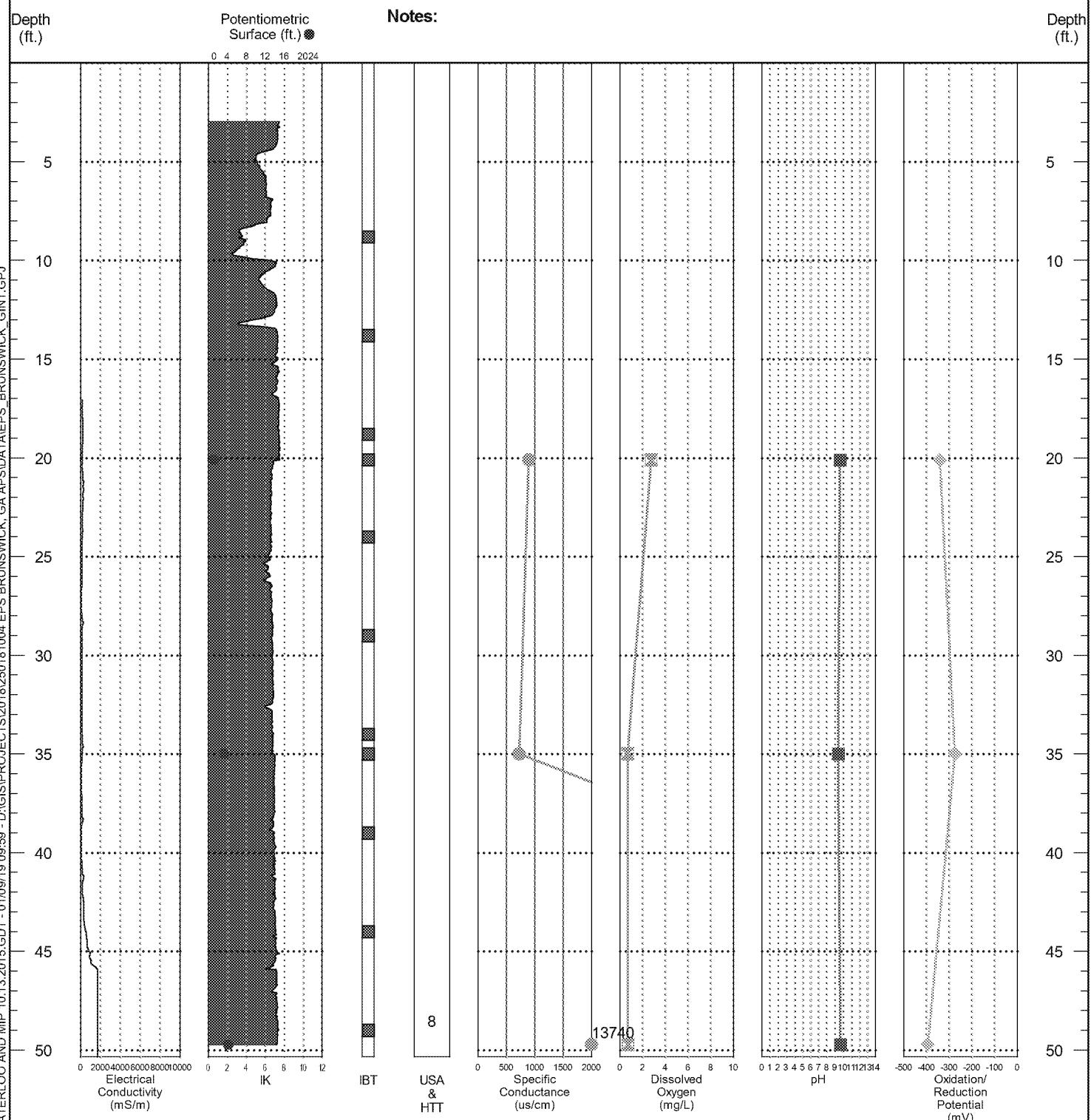
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: SP-CBP-3

Total Depth 49.7 ft.

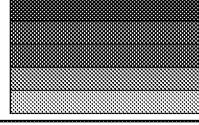


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/6/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

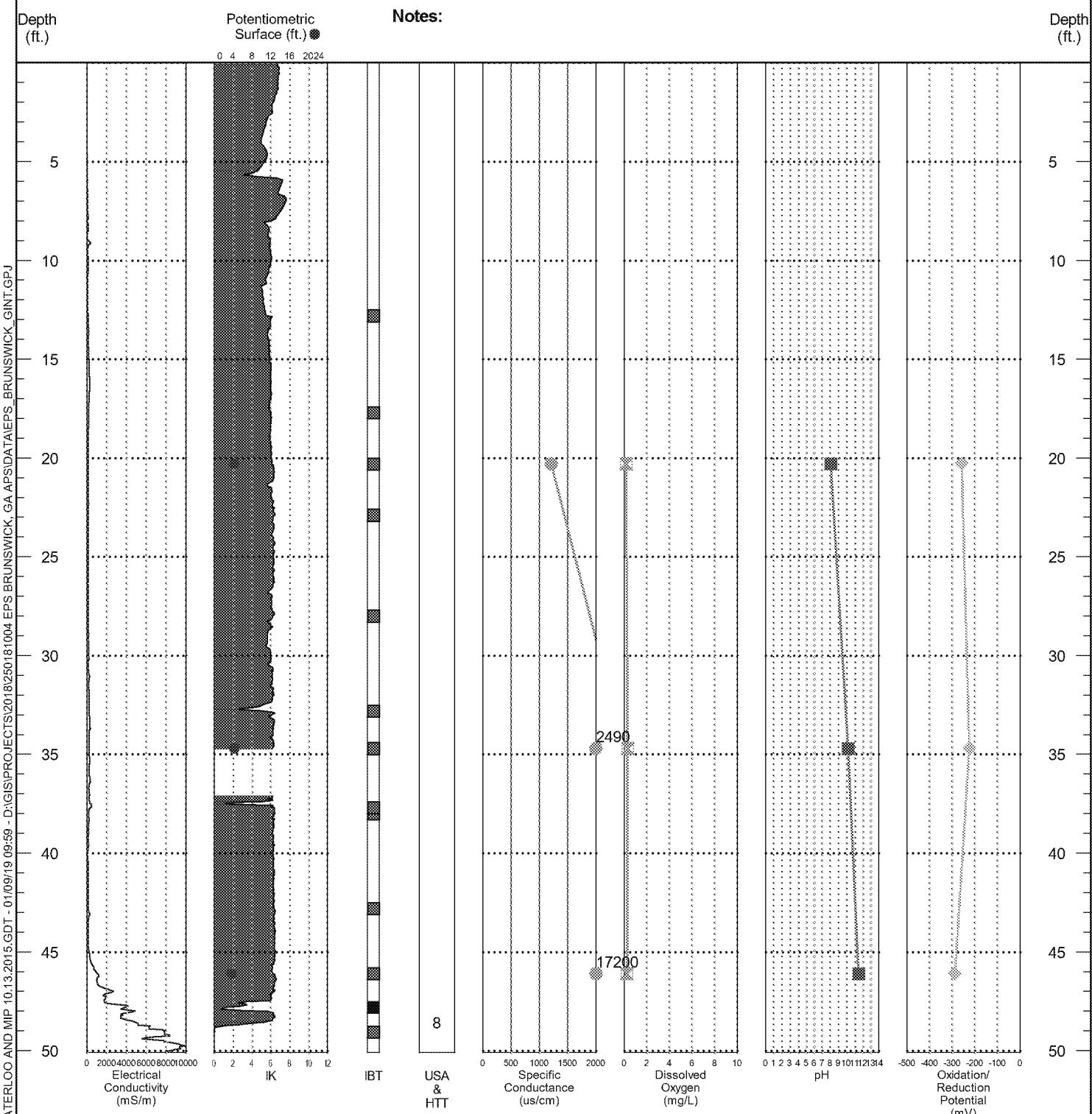
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: SP-CBP-4

Total Depth 49.1 ft.

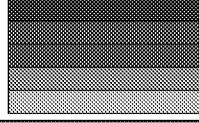


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/1/2018  
 Sampler(s) AMK  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
0.1 to 2  
2 to 4  
4 to 6  
>6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

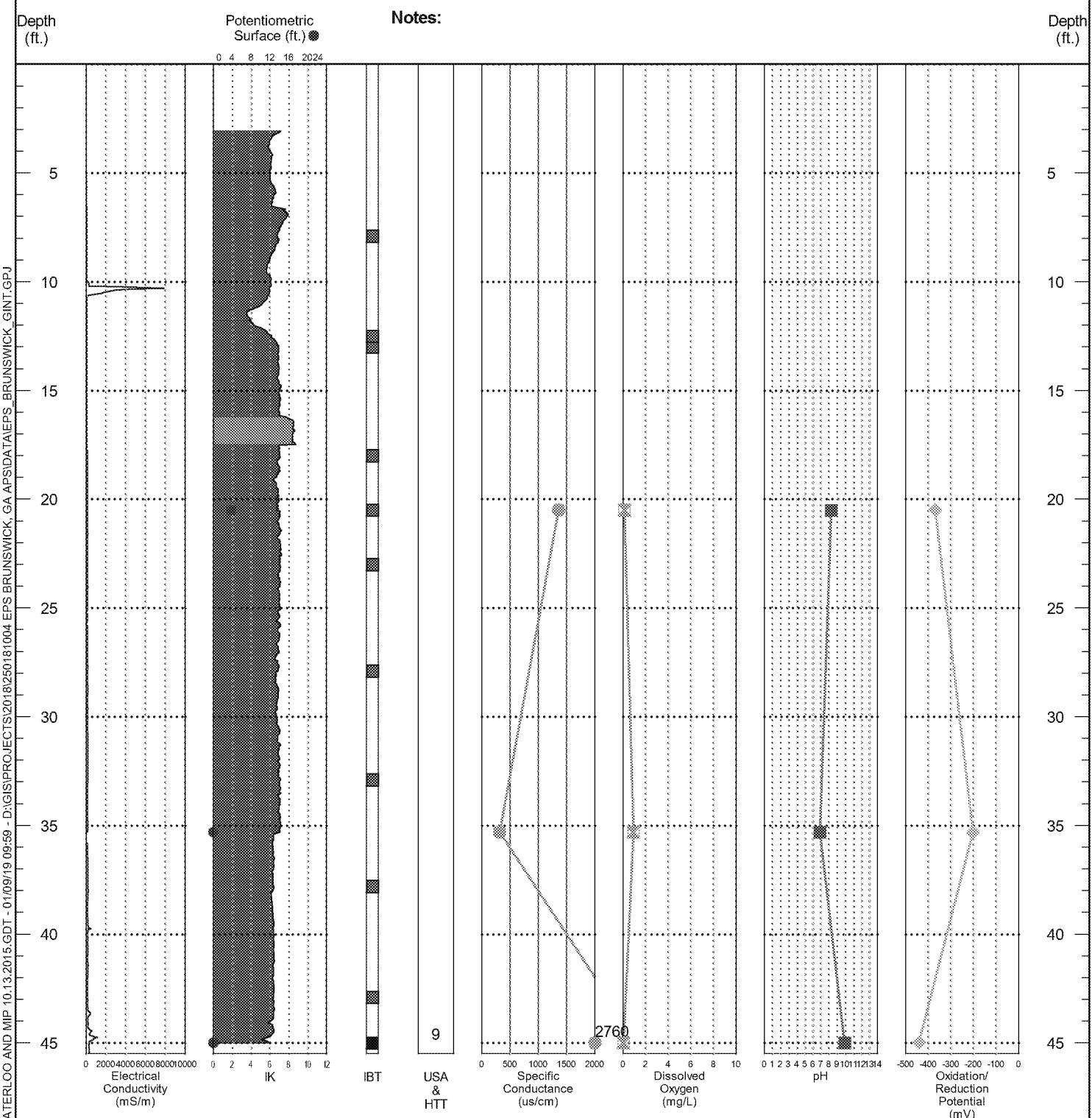
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: SP-CBP-5

Total Depth 45 ft.

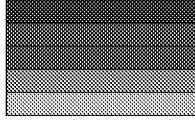


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/2/2018  
 Sampler(s) AMK  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

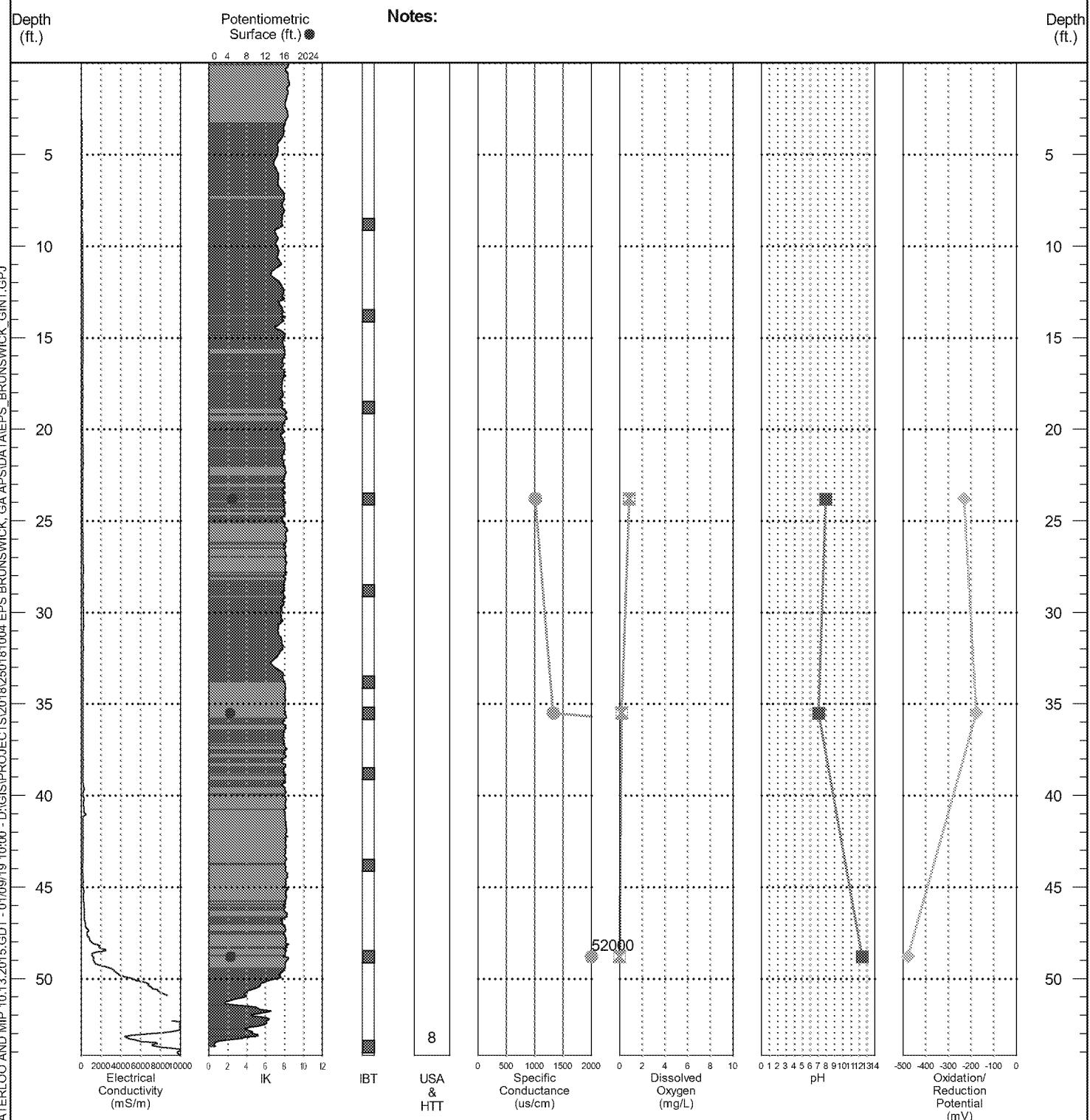
- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

# BORING NAME: SP-SB-1

Total Depth 53.7 ft.

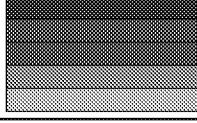


Project Name EPS Brunswick  
 Client EPS  
 Project Number 250181004  
 Project Location Brunswick, GA  
 Date Completed 12/2/2018  
 Sampler(s) CH  
 Drilling Contractor Cascade  
 Gas Drive or Peri Pump Peri



## IK Scale

0 to 0.1  
 0.1 to 2  
 2 to 4  
 4 to 6  
 >6



IBT = IK Behavior Type

- = IK increase when hammer stops
- = IK decrease when hammer stops
- = No change when hammer stops

## Legend

USA = Unsuccessful Sample Attempt

- \* = Could not produce water
- ▲ = Yield deemed too slow
- = Equipment issue

HTT = Hole Termination Type

- 7 = Broken downhole equipment
- 8 = Reached Target Depth
- 9 = ROP dropped below threshold
- 10 = Sudden Hard Refusal

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## 4. PHYSIOCHEMICAL DAILY LOGS





























## **GROUNDWATER PROFILE LOG**

**Client: EPS**

**Profile Location:** SP-CBP-5



**Started**                   **Completed**

Dates: 12/2/2018 12/2/2018

KPRO Box Serial # /  
Acquisition Laptop: 481APS8

Gas Drive or Peri Pump: Peri

Location: Brunswick, GA

Sonde Serial #: ZCRQT7055

Atmospheric Pressure: 35.79

CTS #: 250181004

Drilling Contractor: Cascade

ure (set via P transducer): 69.99

Sampler(s): AMK

Average Depth to Water: -3.81

Gas Drive Pump N<sub>2</sub> Pressure: N/A

## PHYSICOCHEMICAL PARAMETERS

## **GROUNDWATER PROFILE LOG**

**Client: EPS**

**Profile Location:** SP-SB-1



**Started**                   **Completed**

Dates: 12/2/2018 12/2/2018

KPRO Box Serial # /  
Acquisition Laptop: 481-APS-04

Gas Drive or Peri Pump: Peri

Location: Brunswick GA

Sonde Serial #: ZCRQT7063

Atmospheric Pressure: 34.82

CTS #: 250181004

Drilling Contractor: Cascade

KPRO N<sub>2</sub> Pressure (set via P transducer): 69.02

Sampler(s): CH

Average Depth to Water: -4.69

Gas Drive Pump N<sub>2</sub> Pressure: N/A

## PHYSICOCHEMICAL PARAMETERS